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SOUTH AFRICA INTERNATIONAL CONFERENCE ON EDUCATION

**19 – 21 SEPTEMBER 2016**

**"Towards Excellence in Educational Practices"**

# Proceedings

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**Preface**

Education in the 21st century is faced with a wide range of opportunities and challenges which differ substantially from those of the previous century. This situation makes it imperative for educational practitioners at all levels to gather together regularly to network and deliberate in order to achieve excellence in their practices.

Since its maiden edition in 2014, the South Africa International Conference on Education (SAICEd) has been a platform for academics and researchers from all over the world to deliberate, to network and present a wide range of perspectives, scholarship, and expertise in the pursuit of excellence in their educational practices.

SAICEd 2016 is the third edition of the conference. This book presents the proceedings of the full papers that were accepted, after a double-blind peer review, for publication.

We especially thank the keynote speaker, the workshop presenters, those who reviewed the full papers as well as the editors of proceedings who have all worked tirelessly to make this conference a great success.

Prof. A. Mji
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The organising committee of South Africa International Conference on Education 2016 would like to greatly thank the following reviewers who meticulously reviewed the conference papers.

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**Review Process**

In total, 154 manuscripts in different areas within the field of Education were received. Of these manuscripts, 56 were intended to be full papers while the rest were to be short papers. All the full manuscripts were subjected to a double blind review. The reviews were carried out by experts from different countries. Their brief was to base their reviews on 20 criteria they were supplied with. They were also requested to look at the manuscripts with the aim of assisting authors to produce good quality presentations.

Following the review process, the editorial committee considered the reviewers' comments and 11 manuscripts were found to be unsuitable for publication. Reports were forwarded to the remaining 45 authors with suggestions of what needed to be addressed. After receiving the re-worked manuscripts, the editorial committee finally accepted 33 for inclusion in the proceedings. This means that the acceptance rate was just about 59%.

**Editors**

M. M. Dichaba

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# THE MISSING LINKS IN NIGERIA HIGHER EDUCATION TOWARD CONSTRUCTING AND CIRCULATING KNOWLEDGE

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Cross River State College of Education, Akamkpa. Nigeria

## Abstract
From a global perspective, economic and social developments are increasingly driven by the advancement and application of knowledge. Higher education is fundamental to the construction of a knowledge economy and the society. Universally, education triggers progress and development. The output of education (knowledge, skills acquired disposition, etc) is a durable capital asset, the possession of which increases the overall quality of life in the society. Regrettably, Nigeria graduates from higher education system today do not demonstrate commensurate knowledge, skills, competency and proficiency expected. Learners appear not receiving the kind of education that prepare them for life in a competitive 21st century world that demands innovation, creativity, critical thinking, vision, adaptable and transferable skills. The position of this paper is that tertiary institutions in Nigeria are not keeping to their mandate, largely because of the absence of quality teaching, poor funding of education sector and less emphasis on character development programme (the missing link). The paper then evolved a robust programme and recommendations for higher educational institutions to be alive to their mandate to close these missing links that impede on competence and utilization of knowledge between the learners and the reality of the world.

**Keywords:** Higher Education, knowledge construction and circulation, innovation, creativity, quality teaching, character development.

## Introduction

Education in general and higher education in particular, are fundamental to the construction of a knowledge economy and society in all nations (World Bank 1999). The potential of higher education system in Nigeria to fulfill this task is often thwarted by long-standing problems of funding, efficiency, equity, quality and governance. Today, these challenges have been augmented by new challenges linked to the growing role of knowledge in economic development, rapid changes in telecommunication technology, and the globalization of trade and labour market. The priority of education is to produce persons who will be useful to the society as it engenders in the individual a disposition of sound judgment, personal autonomy, and responsibility, and cultivates in the individual knowledge and expertise to be able to think and act accurately and pragmatically as well as rationally. Education is of ultimate value and considered a social service to the teeming youth, in Nigeria. Consequently, it has continued to serve as a critical agent of positive change not only to the individual but also to the nation in general.

It is universally recognized that teaching, research and community service (knowledge construction and circulation) constitute the main functions of institutions of higher learning. Although tertiary or higher education is relatively new in Nigeria, it commenced in the form of a technical college with the establishment of the Yaba College in 1932 while the first Nigerian University (the University of Ibadan) started in 1948 as a college campus of the

University of London. It only attained full university status in 1962 two years after Nigeria obtained its independence from Britain in 1960. Other African countries have had universities like Morocco (University of Alkaroune, Fez) established in 859 AD and Al-Azhar University, Cairo, Egypt established in 975 AD (Okebukola, 2002). Nigeria with forty (40) federal universities, thirty eight (38) state universities and fifty (50) private universities have more universities and higher education institutions today when compared with other countries in West African sub-region. In spite of this Nigeria, still find it difficult to provide the enabling environment for the actualization of higher education mission. In Nigeria, according to Idogho (2011), higher education is set up for the purpose of:

a) Acquisition, development and inculcation of the proper value orientation for the survival of the individual and society;
b) The development of the intellectual capacities of individuals to understand and appreciate their environment;
c) The acquisition of both physical and intellectual skills, which will enable the individual to develop into useful members of the community; and
d) The acquisition of an objective view of the local and external environments.

Thus, the goal of higher education has long been identified as the process that helps develop the whole man physically, mentally, morally and technologically, to enable him/her function effectively in any environment in which they find themselves so that they may become more productive, self-fulfilling and attain self-actualization (Tawari, 1986; Aluede, Aluede & Ufah, 2004). As a means of providing qualitative education for her products, degrees are awarded to grandaunts of these higher institutions who may have distinguished themselves, that is found worthy in character and learning. But suffice to say that most-tertiary institutions in Nigeria today are filled with social vices. Many have argued that the increasing wave of social vices on campuses is as a result of the campus environment, under which the students learn, others on absence of quality teaching. The authors of this paper also considered in addition, absence of character education in the tertiary education curriculum. Higher education is expected to pursue these through; teaching, research and dissemination of existing and new information, the pursuit of service to the community and being a store house of knowledge and values. Missing link is observed in this direction due to the inability of higher education system in Nigeria to tackle these issues satisfactorily.

Knowledge construction and circulation have become the most important factors of economic development in the 21st century, through its capacity to augment productivity. Nigeria with a teaming population of over 120 million and ample natural resources is Africa's sleeping economic giant. It is also a somewhat deformed giant. Political interventions in the higher education system under a series of military governments imposed distortions and constraints on the system's development. Government unnecessary interference in university affairs (e.g. the direct appointment and sacking of vice-chancellors etc) has usurped university autonomy. Example in February 13, 2016 President Muhammadu Buhari (current President) approved the immediate sack of the Vice Chancellors of twelve (12) Federal Universities in Nigeria. Incentives and rewards for research productivity, teaching excellence and associated innovation have gradually disappeared. In consequence, research output dropped, educational quality declined, management structures rigidified and working conditions deteriorated. This has generated a series of staff and students' strikes, culminating to distortions of academic calendars.

To say the least, the abysmal performance of Nigeria tertiary education has generated a lot of questions about the country's ability of actualized the United Nation declaration of Vision 20-20-20 and sustainable development goals. For instance, The centre for World University Rankings (CWUR) has just released its 2016 ranking of universities across the world. Sadly, no university in Nigeria made the list of the world's top 1,000.The ranking, released on Monday, placed Harvard Universities, United States, on top as the best higher institution in the world, followed by Stanford University, also in the U.S. Two universities in the United Kingdom, University of Cambridge and the University of Oxford, are ranked fourth and fifth respectively. The U.S has a total number of 224 universities among the top 1,000, followed by China, with 90. Japan has 74, while the United Kingdom has 65.

Others are: Germany, 56; France, 48; Italy, 48; Spain, 41; South Korea, 36; Canada, 32; Australia, 27. In Africa, only universities in South Africa and Egypt made the list. South Africa has five, while Egypt has four. For South Africa, the five universities and their rankings, according to the CWUR, are: University of Witwatersrand, 176th; University of Cape Town, 265th; Stellenbosch University, 329th; University of KwaZulu-Natal, 468th; and the University of Pretoria, 697th. No Nigerian university also made the list in 2015. CWUR said it used eight objectives and robust indicators to rank the world's top 1,000 universities, and listed them as follows:

1. Quality of Education, measured by the number of a university's alumni who have won major international awards, prizes, and medals relative to the university's size (25%)
2. Alumni Employment, measured by the number of a university's alumni who have held CEO positions at the World's top companies relative to the University's size (25%)
3. Quality of Faculty, measured by the number of academics who have won major international awards, prizes, and medals (25%)
4. Publications, measured by the number of research papers appearing in reputable journals (5%)
5. Influence, measured by the number of research papers appearing in highly – influential journals (5%)
6. Citations, measured by the number of highly-cited research papers (5%)
7. Broad impact, measure by the university's h-index (5%)
8. Patents, measured by the number of international patent fillings (5%)

(CWUR, 2016).

Moreover, the ranking of the top 15 best universities in Africa, the best University in Nigeria – the University of Ibadan is ranked 14$^{th}$ while the first three are South African Universities and with six universities making the list followed by Egypt with three Universities. (Time Higher Education, 2016). This clearly shows that something is missing in Nigeria educational system.

## Missing links in Nigeria higher education

Already is the fact that higher education in Nigeria faces a lot of difficulties in realizing their mission and vision. Some of these difficulties which constitute missing links are discussed here.

### 1. Absence of quality education

In the context of this paper, it refers to the overall process of training whereby the quality of the products from higher institutions is highly assured. That is to say that graduates from any tertiary institution in Nigeria has been sufficiently empowered through quality teaching, learning and experiences, to take control over his/her own life experiences. Such empowerment should necessarily help any individual to think more clearly and also be able to examine possible alternative causes of action or realities. This would expectedly create an understanding that all change, if possible, and the knowledge of alternatives, no doubt, would certainly lead to the desired change (Idogho, 2011).

Quality in this context is also viewed in terms of perfect or consistency and transformation. Quality as perfection or consistency refers to the few defects according to a certain standard. It also measures output indicators such as students' performance in school through graduation rates, acquisition of jobs after graduation among others. While transformational quality refers to the empowerment and enhancement of the students, an added value-qualitative changes in the students (Harvey, 1996).

Efforts in Nigeria to improve educational quality are severally constrained by growing shortages of qualified academic staff. Between 1997 and 1999, the numbers of academic staff declined by 12% even as enrolment of students expanded by 13%. Long term brain drain, combined with insufficient output from national postgraduate programmes in the face of rising enrolments, left the federal universities system with only 48% of its estimated staffing needs filled. Staffing scarcity is most acute in engineering, science and business disciplines, shortfalls are estimated at 73% in engineering, 62% in medicine, 58% in administration, and 53% in sciences. In contrast, no staffing shortages exist in the disciplinary areas of arts and education (NUC, 2002).

Brain drain according to Moja (2010), is the uncontrolled and wide spread migration of academic staff from the Nigerian University system, primary to foreign universities or similar institutions where their services are better appreciated and rewarded. This concept could however be extended to the loss of academic personnel to the non-university and non-academic sectors such as the oil and gas even within the country. Williams and Anekwe (2010) reported that more scientists have left the institutes for greener pastures. For instance, the nation lost 3,649 researchers and scientists in 14 of the 65 research institutes and over 1,000 academic staff from the university system between 1996-2006. Similarly, available data from the Federal Office of Statistics (FOS) shows that between 1992 and 1995 a total of 883 lecturers and professors (6.8% of the total stock of academic staff) left the system. Today, with increasing wave of violence, insurgency, terrorism, kidnapping, secret cultism activities on campuses and general insecurity of life and property the figure would be unimaginable.

The significance of these figures is better appreciated against the background of two facts: first, that the stock from which the loss is suffered was already deficient and inadequate and secondly, that it is difficult, slow and almost impossible to replenish any loss. One of the many implications of brain drain was the rising workload associated with negative imbalance in staff-student ratios. Rising workload, in-turn, has implications for efficiency, as teachers struggle to cope with:

- A large and increasing number of courses,
- Having to rely on residual knowledge to teach courses in which they are not experts,

- As well as large and unmanageable classes, both in teaching and supervision. These, in turn also have implications for the quality of instructions, supervision, counseling and ultimately the quality of product (graduates).

The "publish" or "perish" philosophy also reduces the quality of instruction at higher education, academicians spend time doing research and not teaching. Remuneration of the teaching staff of higher education is far below the living wage. Given the cost of living the academic staff take up extra hours of teaching load teaching at other private universities, or engage in other money making activities to "make ends meets" at the expense of the quality of the service they ought to offer. Widespread dissatisfaction can cause dysfunctional turnover, the best employees moving on and the worst staying on and engaging in other forms of withdrawal behaviour.

When dissatisfied employees are unable to change their situation or remove themselves they may psychologically "disengage" themselves from the job with their minds somewhere else. They may display a very low level of job involvement and commitment, reduce identifying themselves with their jobs and consider their work unimportant and not mind whether they perform well or poorly.

The absence of quality education in Nigeria higher education has many implications. Although it is Africa's largest country with 20% of the region's population, Nigeria has only 15 scientists and engineers engaged in research and development per million persons. This compares with 168 in Brazil, 459 in China, 158 in India, and 4,103 in the United States (World Bank 2002). What chance does Nigeria have of participating in the emerging global knowledge economy? Available data indicate low levels of investment in research capacity and education, and help to explain why the country's non – oil economy has remained consistently sluggish during a decade of international economic expansion. On the research, Nigeria's number of scientific publications for 1995 was 711 – significantly less than its output of 1,062 scientific publications in 1981 by a comparatively much smaller university system (TASK FORCE 2000 cited in Saint and Hartnett, 2003). In contrast, scientific publications were 3,413 for South Africa, 14,883 for India, 310 for Indonesia, and 5,440 for Brazil (Saint and Hartnett, 2003). The country's low research output probably reflects the low priority accorded to research development, quality education, by government decision-makers. For instance, Nigeria's federal university system spends only 1.3% of its budget on research.

Tertiary institution teaching and learning generally has two dimensions: curricula and pedagogy, i.e. content and method. In today's globally competitive knowledge economy, updating of curricula needs to be an almost permanent undertaking every two or three years in order to ensure that the content reflects the rapidly advancing frontiers of scientific knowledge. From the standpoint of pedagogy, expanded access and higher participation rates means that student populations will become increasingly diverse in terms of academic preparation, means, capacities, motivation and interests. At a global level, these changes are fuelling a shift in pedagogical emphasis from staff teaching to student learning. In Nigeria, three pieces of evidence suggest the need for greater attention to contest responsible and innovation in both curricula and pedagogy. First, student success seems limited and dropout rates appear to be high. Preliminary findings conducted by the NUC (National University Commission) in 2002 suggested that dropout rates may be as high as 50% at six universities. Dropout rates of 10% or less were attributed only to the three federal universities at Kano,

Maiduguri and Owerri. Second, public and private employers of university graduates, as well as the government itself, consider the quality of university graduates to be inadequate. Shortcomings are particularly severe in oral and written communication and in applied technical skills. At other time, a mismatch in labour market demand and graduates supply. Hence, the supply of education services is market blind. This provides a very weak base from which to launch responsive actions aimed at introducing the new curricular, reformed content, and different approaches to pedagogy required for competitive performance in the 21st century.

## 2. **Funding**

A responsive model for financing higher education should address three broad areas of public interest: (i) the need to provide hope and educational opportunity to ever larger segments of a country's population i.e., increase access; (ii) the need to encourage (and possibility subsidize) study in certain fields important to a country's economic development; and (iii) the need to ensure a steady flow of talent into careers – such as medicine or teaching where dramatic shifts in supply and demand can negatively affect the quality of life for a country's people (Saints and Hartnett, 2002).

Like other sectors of the economy, the planning and management of education and the quality of service delivery depend on the availability of funds to implement policies and execute programmes and best practices. Over the years, the education sector got not what it needed but what government could afford, and what government could afford has never been enough. In other words, Nigerian Universities System of today is grossly underfunded, which translates into shortage of teaching and learning resources.

Funding of education in Nigeria involves the Federal, State and Local Government. Appropriation and releases as capital and recurrent expenditure for the education sector. It also includes Education Trust Fund, Donor Agencies, Interventions as well as scholarship awards by Federal, States and Local Governments (National Bureau of Statistics, 2011).

The bulk of financing of all federal universities are received from the Federal Government through the National Universities Commission. The budgeting process and expenditures have to adhere to budgeting and expenditure formula stipulated by the National Universities Commission (NUC) as follows: 60 percent total academic expenditure; 39 percent for administrative support; and 1 percent for pension and benefits. It is mandatory for all federal universities to generate 10 percent of their total yearly funds internally through various revenue diversification means such as; consultancy, renting facilities etc.

The United Nation recommended 26 percent of the total expenditure to be devoted to education. An insignificant proportion of Nigeria's financial resources are spent on education. Education budgets as percentages of total national budgets were 8.43% in 2002 and 8.67% in 2013. These fell below those of other developing countries. Ghana, South Africa, Cote d' Ivoire, Kenya and Morocco had 31%, 25.8%, 30%, 23% and 26.4% respectively of their national budget for education (Abayomi, 2012), World Bank (2012) (see table 1 below).

The NUC through its costing and staffing parameters 60% recurrent expenditure is expected to be incurred on academic units. That is, direct teaching (40%), teaching support (2%),

research (8%), public service (3%), library (5%), staff development (1%) and general academic (1%).

According to Obasanyo and Varkey (2012) inadequate financing means large classes, insufficient books and teaching supplies, poorly constructed schools and aging infrastructure. The total national recurrent expenditure in education in 2000 was (12.56%), 2001 (31.19%), 2002 (11.56%), 2003 (19.56%), 2009 (16.66%), and 2011 (10.13%). These are far from the 26% recommended by the UNESCO to be spent on education (see table I below).

As a result of poor funding, Nigeria's educational system is be deviled by a myriad of problems, which keeps worsening by the day. These include among others poor funding; shortage of quality staff, dearth of infrastructure; inadequate classrooms and offices, inadequate laboratories for teaching and research, shortage of books and journals; indiscipline; inconsistent and ill-conceived policies, low staff-student ratio; poor record keeping, fraud and self-deception with regard to accreditation, failure to send staff regularly on short courses to improve and enhance their competences; and the fact that government often reneges on the mutual agreements between it and the unions of educational institutions.

**Table I: 2013 Annual Budgetary Allocation to Education by some selected countries**

| S/N | COUNTRY | BUDGETARY ALLOCATION TO EDUCATION (%) |
|---|---|---|
| **1** | Ghana* | 31.0 |
| **2** | Cote d'ivore* | 30.0 |
| **3** | Uganda* | 27.0 |
| **4** | Morocco* | 26.4 |
| **5** | South Africa* | 25.8 |
| **6** | Swaziland* | 24.6 |
| **7** | Mexico | 24.3 |
| **8** | Kenya* | 23.0 |
| **9** | United Arab Emirate (UAE) | 22.5 |
| **10** | Botswana* | 19.0 |
| **11** | Iran | 17.7 |
| **12** | United States of America (USA) | 17.4 |
| **13** | Tunisia* | 17.0 |
| **14** | Lesotho* | 17.0 |
| **15** | Burkina Faso* | 16.8 |
| **16** | Norway | 16.2 |
| **17** | Columbia | 15.6 |
| **18** | Nicaragua | 15.6 |
| **19** | India | 12.7 |
| **20** | Nigeria* | 8.7 |

*African countries
**Source**: World Bank (2012) in I. Udo (2013)

**Table II: Federal Government Recurrent Expenditure (N million)**

| Year | Total Recurrent Expenditure | Education Recurrent Expenditure | % of Education to Total Recurrent Expenditure |
|---|---|---|---|
| **2000** | 461,600.00 | 57,956.64 | 12.56 |
| **2001** | 579,300.00 | 39,882.60 | 31.19 |

| | | | |
|---|---|---|---|
| **2002** | 696,800.00 | 80,530.88 | 11.56 |
| **2003** | 984,300.00 | 64,782.15 | 19.56 |
| **2004** | 1,110,643.60 | 76,527.65 | 6.89 |
| **2005** | 1,321,229.99 | 82,797.11 | 6.27 |
| **2006** | 1,390,101.90 | 119,017.97 | 8.56 |
| **2007** | 1,589,269.80 | 150,779.27 | 9.49 |
| **2008** | 2,117,362.00 | 163,977.47 | 7.74 |
| **2009** | 2,127,971.50 | 137,156.62 | 16.66 |
| **2010** | 3,109,378.51 | 170,770.56 | 5.49 |
| **2011** | 3,314,513.33 | 335,837.89 | 10.13 |

**Source:** CBN Statistical Bulletin (2000-2011).

## 3. Character education

Character education is the deliberate effort to help people understand, care about, and acts upon core ethical values. Esu (2009) defined values as ideals that guide or qualify your personal conduct, interaction with others, and involvement in your career. Values help one to and inform one on how he or she can conduct one's life in a meaningful way. On his part, Bolarin (2009) defined values to mean trait, practices, acts, ideals, beliefs, attitudes, and principles that a group or society considers to be of merit, worthwhile, dear, acceptable and right. The school being an agent of social reproduction is expected to shape the lives of the young ones, and equip them with the right values. By equipping them with the right values, they now become responsible and productive members of the society.

There is an ethical crisis in our country Nigeria. This manifests itself in such forms as exhibition of negative ethical attitudes such as indiscipline, poor attitude to work, lack of respect of law and order, cheating, drug pushing, engaging in armed robbery, oil bunkering, human trafficking and kidnapping. Above all, there is pervasive lack of moral integrity in business, banking and commerce at home and abroad to such an extent that Nigerians are everywhere usually suspected of cheating, stealing and fraud especially of the 419 variety.

With particular reference to education, there is lack of moral integrity for instance, pervasive certificate forgery, examination malpractices, rapping, and the menace of obscene mode of dressing in our educational institutions. Academic achievement is a powerful by product of successful character education efforts. Character education entails creating schools or learning environment that foster ethical, responsible and caring for learners by molding and teaching good character through emphasis on universal values that all people share. It is intentional, proactive effort by schools to instil in their students important core ethical values such as respect for self and others, responsibility, honesty, hard work, integrity and self-discipline that would ensure long-term solutions that address moral, ethical and academic issues that are of growing concern in the society. Character education may address such critical concerns as student absenteeism, discipline problems, drug abuse, gang violence, and poor academic performance. At its best, character education integrates positive values into every aspect of the school day. Tertiary education is expected to play a role in human and social development in terms of shaping values and ways of thinking. This includes cultivating certain values for political and social participation and global citizenship, shaping in turn, societies, cultures and points of view. Ultimately, tertiary institutions need to re-examine the

values associated with the social positioning of their institutions. Enoh (2010) draw a link between intellectual discipline and moral discipline when he declared that teaching must be central focus, since without teaching, they can be no learning and without learning which leads to a transformation and reorientation of our perception of the world around us, they can be no education.

In a school committed to developing character, the core values are treated as a matter of obligation, as having a claim on the conscience of the individual and community. An institutional core value identifies the kind of world we want, institutional core values are ideals. It identifies what the institutions ideally want to be. It provides a tangible, measurable bench-mark towards which an institution can move and uniquely contribute to society. To what extent can we say tertiary institutions of higher learning in Nigeria have contributed by checking and correcting the moral decay not only within the institutions but also in the larger society? There is need for tertiary institutions of learning in Nigeria to re-examine their core values as public confidence in and support for higher education has waned. The growing public dissatisfaction and distrust for tertiary institutions core values may not be unconnected with the loss of moral compass in our schools.

Character education asserts that the validity of these values, and our responsibility to uphold them, derive from the fact that such values affirm our human dignity, promote the development and welfare of the individual person, serve the common good, meet the classical tests of reversibility (i.e. would you want to be treated this way?) and universality (ie would you want all persons to act this way in a similar situation?), and inform our rights and responsibilities in the society (Lickona, 2003). Character education seeks to develop virtue – human excellence – as the foundation of a purposeful, productive, and fulfilling life and a just, compassionate, and flourishing society. Character education takes deliberate steps to cultivate moral and intellectual virtues through every phase of school life – the example of adults, the relationships among peers, the handling of discipline, the resolution of conflicts, the content of the curriculum, the process of instruction, the rigor of academic standards, the environment of the school, the conduct of extracurricular activities, and the involvement of parents. Everything that happens in the life of the school is character education, because everything affects character. To develop character, school must strive to be a community of virtue in which moral and intellectual virtues are modelled, expected, studied, reflected upon, upheld, celebrated, and continually practiced in daily life. The advocated national policy on values education and character formation should be seen as a catalyst for re-branding Nigeria where all the negative values are reversed and ensure the enthronement of enabling values of caring, well governed society where justice and equity reigns. The absence of national policy on values education and character education is the link that is missing in our education toward constructing and circulating knowledge. Tertiary institutions in Nigeria most help in the development of new attitudes, new values, new techniques and orientations demanded of a new order.

## Conclusion

The paper acknowledged that knowledge construction and circulation is indispensable in the 21st century with all-round development drive of developing countries including Nigeria. It prioritized higher education institutions as useful to engender the needed development. It also acknowledged that the development strives are distorted or constrained by some systemic flaws: absence of quality teaching and quality education, poor and inadequate funding of

education and absence of character education. This is so because the challenge of attaining national development is seen to be attitudinal in character and in form. The paper strongly advocated for adequate attention toward creative/quality teaching, investment in education sub-sector and strengthening of values education as a possible paradigm for behavioural transformation, ethical reorientation and overall educational quality.

**Recommendations**

Outcome-Based Education (OBE) advocated by Basheka, Muhanda and Kittobe (2009) for all higher education institutions is strongly recommended. OBE's learner centered approach focuses on what learners actively learn and how well they learn it and not on what they are supposed to learn. Emphasis is not on what teachers want to achieve but rather on what the learners should know, understand, demonstrate and become. Teachers and learners focus on predetermined outcomes to be achieved by the end of each teaching-learning process and the outcomes are determined by real life needs and integration of knowledge, competence and responsibility. The outcomes of the OBE model emphasize the development of critical, investigative and future-oriented citizens.

Some lectures lack practical pedagogical skills to effectively facilitate the development of higher order thinking skills through appropriate methodology. Consequently, the students are not empowered to apply and transfer knowledge so as to transform themselves and society. Lecturers should achieve a critical systemic discourse by establishing the bridge between theory and practice through a process of critical reflection and action.

Governments at all levels should continue to increase funding to educational institutions. The situation in our educational institutions will improve considerably if the government spends at least 26-30% of its annual budget on education.

The aims and objectives of Nigeria Education that centres on the inculcation of the right type of values and attitudes must be given more attention in our school system.

Tertiary institutions must refine and clearly articulate their fundamental core values and identify criteria for checking academic staff and students whose value does not conform with the values of the school system.

There is need for adaptive universities responses vis a vis the labour market and formation of knowledge coalition with other systems linked to career counseling in universities and greater private sector involvement in curriculum consultations, faculty attachments, student placement and research funding.

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# NEW TERRAINS FOR ADULT EDUCATION AND INSTITUTIONALISATION OF THE AGED IN ZAMBIA

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## Abstract
The study examined the need for suitable adult education programmes for the aged in old people's homes in Zambia. It also sought to establish the need for training of caregivers in these homes. The study was guided by activity theory. It was a survey using a mixed method approach. The study population included all the aged and caregivers in the nine old people's homes and government officers in the Ministry of Community Development, Mother and Child Health. The sample comprised 165 purposively selected aged persons, 17 caregivers and 16 government officers. All the respondents were interviewed. Qualitative data was analysed by identifying emerging themes. Quantitative data was analysed to generate frequency distribution tables and percentages. The findings of the study revealed that the aged in old people's homes needed adult education programmes to help them overcome idleness and boredom due to lack of stimulating and productive activities. The study also revealed that caregivers needed training to acquire skills and competencies in handling the aged. The study recommended that appropriate adult education programmes should be provided to the aged and their caregivers in all old people's homes, signalling new terrains in the adult education provided in Zambia.

**Keywords:** New terrains, adult education, institutional care, aged and caregivers

## Introduction
Education is a human right critical to the fulfilment of one's aspirations. It is an essential tool for attainment of equality, development and peace (Central Statistical Office, 2010). It leads to individual creativity, improved participation in the social, economic, cultural and political life of society and effective contribution to human development. Education is a prerequisite not only to the full exercise of the individual's rights but also to understanding and respecting of the rights of others (Kelly, 1999). In Zambia the mission of the Ministry of Education is to guide the provision of education for all citizens. Education should enable them pursue knowledge and skills, manifest excellence in performance and uphold moral uprightness. It should also enable them defend democratic ideals, accept and value other people on the basis of their personal worth and dignity, irrespective of gender, religion, ethnic origin or any other discriminatory characteristic (GRZ, 1996).

The traditional concept of adult education in Zambia has been one meant for community development and target-groups such as farmers, agricultural extension officers and workers. Not much attention has been paid to the concept of lifelong learning and training of caregivers working in old people's homes. This situation is not peculiar to Zambia, as Amutabi & Otunga (2005, p61) contend:

> ...Left with limited financial resources, many governments have concentrated their energies on basic formal education, catering mainly for children. Adults and adult education have been ignored and continue to suffer marginalisation in Africa.

Yet there is a growing phenomenon of institutionalisation of the aged in Zambia (Mapoma, 2013; Changala, 2015). This gap has signalled the need to address the emerging challenges of the phenomenon. This paper examined adult education as it is provided in the traditional sense in Zambia, with a view to introducing new forms which would be responsive to the needs of the institutionalised aged and their caregivers. The paper has an introduction, statement of the problem, objectives of the study, research questions, review of literature, theoretical framework and methodology. Finally it covers the findings, discussion of the findings, conclusion and recommendations.

**Institutional care of the aged**

Oldman and Quilgars (1999) refer to institutional care as a place where individuals are confined in a formal setting with regulated leisure time. In such settings, activities such as sleep, walk and play take place in-house. Denham (1983) opines that the institutions are governed by one authority. Each phase of a person's daily routine is rigidly fixed and carried out in company of others, who are treated alike. Denham also reiterates that there are enforced activities which are part of the overall plan designed to fulfil the official aims of the institution.

Kamwengo (2001) argues that of late institutional care for the aged in Zambia is limited to services provided by homes for the aged while in the past it included services provided by a nursing home and a geriatric centre. A home for the aged is an institution providing food, accommodation, nursing care, physical, social and emotional care to elderly and other debilitated persons (Kamwengo, 2002). GRZ (2011) adds that homes for the aged are homes which keep older people in need of care and are supported wholly or partly by voluntary organisations.

Kamwengo (2001) points out that although institutional care of the aged was discouraged in Zambia, the government decided to retain the existing old people's homes. This was because it realised that there would always be some people in institutions of care because of factors such as childlessness and cultural taboos associated with ageing. Some people who are not able to trace their families or remember their villages mainly because of urbanisation or illness, and some without families would be accommodated. In this study, the terms aged, older persons, older people, the elderly and elderly persons were taken to mean the same thing and, therefore, used interchangeably.

At the time of this study there were nine old people's homes in Zambia. Two were run by the Government of the Republic of Zambia (GRZ) while the rest were run by faith-based organisations (FBOs). Table 1 below shows the location and proprietorship of old people's homes in Zambia:

**Table 1: Location of old people's homes in Zambia**

| No | Old People's Home | District | Province | Proprietorship |
|---|---|---|---|---|
| 1. | Chibolya | Mufulira | Copperbelt | Department of Social Welfare (GRZ) |
| 2. | Mitanda | Ndola | Copperbelt | Salvation Army (FBO) |
| 3. | Chibote | Luanshya | Copperbelt | Catholic Church (FBO) |
| 4. | St.Therese's Village | Ndola | Copperbelt | Ndola Ecumenical Hospice Association (FBO) |
| 5. | Maramba | Livingstone | Southern | Department of Social Welfare (GRZ) |

| | | | | |
|---|---|---|---|---|
| 6. | Divine Providence | Lusaka | Lusaka | Catholic Church (FBO) |
| 7 | Kandiana | Sesheke | Western | United Church of Zambia (FBO) |
| 8. | Likulwe | Senanga | Western | Catholic Church (FBO) |
| 9. | Nkhulumazhiba | Solwezi | North-Western | Peace Embassy International (FBO) |

Source: Field Survey, 2015.

The table above shows that most old people's homes in Zambia are located on the Copperbelt. This is Zambia's leading mining region with two located in the provincial capital, Ndola, and another two in Mufulira and Luanshya. Of the four, the government owns only one, while the other three are owned by FBOs. There are two old people's homes in Sesheke and Senanga of Western province. Both are located away from the provincial capital, Mongu and run by FBOs. In Lusaka, Southern and North Western provinces, the homes are located in provincial capitals and only the home in Southern province is government owned.

**Statement of the Problem**

Current Adult education provision in Zambia is mostly occupational, where graduates seek formal employment as opposed to liberal adult education which perceives learning for its own sake within the framework of lifelong learning. Not much is known regarding the provision of suitable adult education programmes for the institutionalised aged people in Zambia. This gap called for new terrains in adult education provision for the institutionalised aged in Zambia.

**Objectives of the Study**

The objectives of the study were to:

1. establish the activities done by the aged in old people's homes in Zambia.
2. identify the type of adult education programmes provided to the aged in old people's homes in Zambia.
3. ascertain the participation in adult education programmes by the aged in old people's homes in Zambia.
4. establish the availability of training programmes for caregivers in old people's homes in Zambia.

**Research Questions**

1. What activities are done by the aged in old people's homes in Zambia?
2. What type of adult education programmes are provided to the aged in old people's homes in Zambia?
3. How much do the aged in old people's homes in Zambia participate in adult education programmes?
4. Are there training programmes for caregivers in old people's homes in Zambia?

**Literature Review**

This section presents the review of literature related to the topic and the theoretical framework which guided the study.

**The Concept of an Aged Person**

Ageing seemingly is a difficult concept to define as it is both socially and contextually oriented. Scholars unanimously define old age based on the number of years ranging from 60

and above. For instance, Kamwengo (2001) defines an aged person as anyone aged 65 years and older. Other scholars (GRZ, 2011; Hurlock, 1980) refer to an aged person as any male or female person aged 60 years. HelpAge International (2012) cites the United Nations which uses 60 years to refer to older people and explains that this is the line which divides younger and older cohorts of a population, which is also used by demographers. Hurlock, however, cautions that there is recognition that chronological age is a poor criterion to use in marking off the beginning of old age because there are such marked differences among individuals in the age at which ageing begins. HelpAge International concludes that there is no exact definition of "old" as this concept has different meanings in different societies. This study adopted the 60 years definition of an aged person in line with Hurlock (1980), GRZ (2011) and HelpAge International (2012).

**Education as Lifelong Learning**

Education is taken to comprise organised and sustained communication designed to bring about learning (Kelly, 1999). It is a process of acquiring knowledge, skills, competencies, attitudes, values, beliefs and behaviour which are transmitted from one generation to the next. Ministry of Finance and National Planning (2002) states that all citizens of a country have a right to education. Munoz (2010) also acknowledges that education is an individual right but it is also a social right whose maximum expression is in full exercise of this right by a person. He explains that education is not limited to a period of time in men and women's lives, but encompasses the full course of their existence; lifelong learning. This includes the latter part of one's life; the aged in old people's homes.

According to Rabušicová and Rabušic (2006) lifelong learning has some basic features. The first is that education is no longer limited to a certain stage of life; the school-age period, but instead spans an entire lifetime. The second feature is that it involves not only formal education provided by educational institutions, but all forms and types of learning regardless of the institution or the environment. The third feature of lifelong learning is that of equal opportunity guaranteed to everyone regardless of age, motivation, talent or social status.

Grandal (2008) points out that many elderly individuals demonstrate great interest and ability to learn new information and that ageing should not be seen as purely a time for decreased abilities, but rather as an opportunity for growth, increased wisdom and the attainment of new skills. Boulton, Gillian & Purdie (2003) explain that the capacity of older adults to remain physically, mentally and socially active is dependent on continued participation in learning and education. They, however, contend that older adults are often not considered as likely candidates for learning by society. Shikur (1997) observes that the important principle of adult education relates to the strong belief in the educability of humankind and that adult education basically negates the belief that learning is possible only in childhood and not later in adult life. Oyedeji (1992) posits that investigations have shown that adults can learn at any age up to cessation of life if their sociological maturation is intensified, if they are not timed in their learning activities and if they are allowed to participate in the planning process. This means that the aged are capable of learning in different contexts and situations so long as they are provided with the opportunity to do so.

**Benefits of Education to Older People**

There are various benefits that education provides to all citizens such as promoting economic growth, national productivity, innovations and social cohesion (Central Statistical Office,

2012). Older people can also derive several benefits from participating in learning programmes. Ala-Mutka and Punie (2007) assert that learning is a way for older people to stay active, to participate in society and to share the knowledge and experience gained in their lives. Other benefits include personal development, gaining new skills and a sense of achievement within the activity undertaken. National Institute of Adult Continuing Education (2005) adds that learning enables older people to achieve better physical and mental health through increased self-confidence, self-esteem, increased mobility and reduced dependence on others. It also brings about better ability to manage pain and illness, lowered levels of depression and faster recovery rates.

Learning is not just about skills and qualifications that help people get on in life. It also helps improve the lives and wellbeing of everyone who participates and helps to build a better society. Learning for older people in care settings is a mixture of fun, challenge and mental stimulus, and helps in the maintenance of social, physical and mental skills. It can take many forms; for example, chair-based exercises, watercolour painting, digital photography, reading groups, gardening and poetry. It can also bring massive improvement to individuals' health, wellbeing and confidence (National Institute of Continuing Adult Education, 2014 & World Health Organisation, 2004). Courtenay *et al.* (1983) report that when undereducated older adults were asked to report what they would be most interested in learning, health topics such as checking blood pressure and reading a thermometer ranked first.

**Provision of Adult Education for Older People**

Alfageme (2007) points out that educational programmes aimed specifically at older people could be in the non-formal learning environment. He explains that such programmes need not be provided by education or training centres. However, these centres could be used as venues for such programmes. In the context of this study, non-formal education was considered relevant and ideal for the aged in old people's homes in Zambia. Alan-Mutka and Punie (2007) support this idea when they observe that for all age groups, and especially for older people, non-formal learning is an important part of life that needs to be considered when aiming for supporting learning, even though it may be difficult to arrange and its results cannot always be measured. In agreement, Dib (1988) classified non-formal education to be vocational and knowledge-based non-formal education. The aged in old people's homes would need both types.

**Training of Caregivers**

For caregivers to provide appropriate services and care to the aged in an institutional set-up, it is important that they possess relevant knowledge and skills on how to deliver these services and care. It is, therefore, important to provide them with education and training opportunities to enhance their performance. Montgomery, Rowe and Kosloski (2007) postulate that education interventions are designed to provide caregivers with critical information that will augment their abilities to provide care and cope with associated stress of looking after the aged. They contend that most of these programmes are meant to increase the knowledge and skills of caregivers to provide care or address their psycho-emotional needs by teaching self-care and coping skills. They add that skill-focused educational programmes include those that teach about specific disease processes, direct care skills and behaviour management. These skills would be essential in the care for the aged in old people's homes in Zambia.

According to Beringer and Crawford (2003), there is a relationship between institutional care outcome and staffing levels. They state that lack of staffing, skill-mix, training and services leaves the elderly people at risk of harm. They suggest that care facilities should make a greater investment in staff training and professional development. This is in agreement with Kamwengo (1999) who asserts that many caregivers in both the community and homes for the aged in Zambia lack skills and knowledge for effectively working with and for the aged. He identifies these skills to be counseling and handling the aged, and knowledge about their needs, demands and expectations. Clare (2007) posits that there is a need to train staff in long-stay care homes in nutrition and dietetic services, menu planning and appropriate prescribing of nutritional supplements and weight management of residents. Similarly, Nyanguru (1991) contends that caregivers need simple physiotherapy skills, occupational therapy skills and general supervision of the elderly to prevent malnutrition. He further states that there is need for better understanding by staff of what constitutes proper nutrition for older people. However, Hannan, Norman & Redfern (2001) caution that educational and training programmes must be relevant to the needs of staff in old people's homes and residents.

## Theoretical Framework

The study is grounded on activity theory of ageing which is based on the assumption that successful ageing occurs when older adults stay active and maintain social interactions. Literature cited in Edwards (2011) posits that there is a positive relationship between activity and life satisfaction. Therefore, successful ageing is highly dependent upon maintaining a high level of activity. The theory further reiterates the significance of old age engagement as a way of promoting life satisfaction and the likelihood of them retaining their middle-age active levels much longer (Blackburn & Dulmus, 2007).

## Methodology

The study was undertaken in all nine old people's homes in Zambia as a survey using a mixed method approach. Researchers held interviews with 165 purposively selected elderly persons and 17 caregivers in these homes and 16 government officers. The 16 government officers comprised 3 from the Social Welfare and Planning units of the Ministry of Community Development, Mother and Child Health (MCDMCH) headquarters in Lusaka, 5 from provinces and 8 from districts where the nine old people's homes are located. The 17 caregivers were all workers in these homes. The aged were identified as principle actors and main respondents, while caregivers and government offices superintended over the affairs of old people's homes, directly and indirectly, respectively. All the interviews were tape-recorded and transcribed for accuracy. Qualitative data was analysed by recording the responses under emerging themes in each objective. Verbatims by respondents which were deemed directly appropriate and critical to the purpose of the study were also presented. Quantitative data was analysed, calculated and presented in frequency and percentage tables.

## Study Findings

The study findings are presented under the following sub-themes emerging from the data analysis: activities of the aged in old people's homes, adult education programmes provided to the aged, participation in educational programmes by the aged and training for caregivers in old people's homes.

### Activities of the Aged in Old People's Homes

The study sought to establish the main activities the aged in old people's homes in Zambia were engaged in on a day-to-day basis. The aged were asked to indicate. Table 2 below shows their responses:

**Table 2: Activities of the Aged in Old People's Homes**

| Activity | Frequency (n=165) | Percent |
|---|---|---|
| Nothing (idling) | 136 | 82.4 |
| Cleaning | 29 | 17.6 |
| Gardening | 15 | 9.1 |
| Weaving mats | 10 | 6.1 |
| Making ropes and fishing nets | 7 | 4.2 |
| Making baskets | 7 | 4.2 |
| Rearing chickens | 5 | 3.0 |
| Sewing | 3 | 1.8 |
| Knitting | 2 | 1.2 |
| Reading | 1 | 0.6 |
| Repairing electrical appliances | 1 | 0.6 |
| Repairing shoes | 1 | 0.6 |

The majority (82.4%) of the respondents indicated that they did nothing most of the time; idling. However, 17.6% stated that they helped in cleaning activities, while 9.1% stated that were engaged in gardening. A further 6.1% said that they were weaving mats. The rest of the respondents (4.6% to 0.6% were involved in rope, fishing net and basket making, chicken raring, sewing, knitting, reading and repairing electrical appliances and shoes.

A female respondent at Chibote old people's home said:

> *There is nothing much to do here apart from eating and sleeping.*
> *Sometimes I get bored and feel lonely because we do nothing the whole day.*

Additionally, a caregiver at Chibote old people's home stated:

> *I explained to the Sisters that it was not good for elderly persons at the home to just be sitted, doing nothing the whole day. They responded and introduced some training activities in knitting, embroidery and vegetable tendering. Unfortunately, among those who learnt the skills, some have died and others have been taken away by their relatives. The only ones remaining now are these two who sew and knit. We need help and support so that more of these people can learn the skills from other.*

The sentiments above indicate that the activities taking place in old people's homes were not vigorous and stimulating enough. In any case, these activities were not institutionalised but sporadic events taking place within the homes, largely based on the individual initiative of participants.

**Adult Education Programmes provided to the Aged**

The findings of the study indicated that there were very few adult education programmes provided in old people's homes in Zambia. Only four out of the nine homes had offered some, such as agriculture, crafts, hygiene, nutrition, knitting and weaving, Bible study and HIV/AIDS awareness. The study also established that most respondents did not understand the meaning of adult education programmes. This is because they took adult education to mean only the structured learning which involves sitting in a classroom with a teacher delivering lessons; formal adult education. It took the researchers to explain the meaning of adult education in the context of this study; non-formal adult education. For example, when the aged were asked whether they were provided with educational programmes, most of them denied and yet they were provided with some non-formal education such as personal hygiene and sanitation. They conceived adult education programmes in the traditional sense. This also reflects the lack of variety in adult education activities available for the aged. For instance, a caregiver at Kandiana old people's home stated:

> *Formally there are no educational programmes at this home. What we try to do is to have them work with crafts. Some volunteers also come here to spend time with the elderly and teach them agriculture, Bible study and issues of HIV/AIDS. There has been no formal teaching. The elderly need skills in better farming methods, nutrition and so on. Some elderly persons already have skills in basket and fishing net making and curving. They just need support and an environment conducive for them to share their skills with others. Energetic residents could easily participate in these programmes.*

The above comments indicate that old people's homes in Zambia did not have institutionalised programmes of activities to keep the aged engaged, active and stimulated in line with activity theory of ageing. It would have been expected that old people's homes have a standard set of activities that the aged could be involved in. In the absence of a standardized programme of activities, residents did what they wanted to do out of personal interest and understanding as already, alluded to above.

**Participation in Adult Education Programmes by the Aged**

The aged in old people's homes were asked whether they would want to participate in adult education programmes. The majority (51.5%) indicated that they would want to do so while 43.0% stated that they would not. However, 5.5% could not state whether they would be willing to do so or not.

The respondents who had indicated that they would like to participate in educational programmes were asked to give reasons. Most (42.3%) said they wanted to keep busy and reduce boredom, while 18.8% stated that they wanted to be informed about national and international affairs. Another 14.1% wanted to acquire new skills, while 8.2% said that they wanted to be productive. Further, 5.9% of the respondents indicated that they wanted to learn for fun, while 3.5% stated that learning would enable them read the Bible. Finally 2.3% showed that it would enable them know their rights. For example, a male respondent at Chibolya old people's home stated:

> *The government would do well to involve us in learning activities from time to time. We have plenty of time here and mostly, we do nothing as you have seen*

*for yourself. So if we could have "shibukeni", it would be very exciting and I am sure a good number of my colleagues would like to participate in the programmes.*

"Shibukeni," literary means "wake up" in Bemba, one of the local languages in Zambia. It is used to refer to adult literacy and mainly for those attending basic adult education literacy classes.

Caregivers, like their clients, felt underrated in that they were not provided with adult education programmes to support them in their work. They contended that if they were given the necessary support, they would be better workers, who would also help the aged to be creative, active and more productive.

The respondents who had stated that they would not want to participate in educational programmes were also asked to give their reasons. Table 3 below shows their responses:

**Table 3: Reasons for opting-out**

| Reasons | Frequency n = 71 | Percent |
|---|---|---|
| Too old to learn | 46 | 64.8 |
| Lack of motivation to learn | 18 | 25.3 |
| Poor eye sight | 11 | 15.5 |
| Education is not necessary | 06 | 8.4 |

A male respondent at Divine Providence Home said:

*Participating in educational programmes would not make sense to me because I am now too old to learn anything; it is useless.*

A female respondent at Chibolya old people's home expressed similar sentiments when she stated:

*I am past learning age. What will I do with education at my age? All I need to do is just sit around. However, if I was given farm inputs and chance, I would like to engage in farming activities because I am still strong as you can see for yourself and I think that would be more interesting.*

These respondents had a traditional understanding of adult education, which was limited to formal knowledge acquisition and education for employment. This type of understanding does not easily admit the need for new forms of education that would be appropriate for the aged in old people's homes.

**Training of Caregivers in Old People's Homes**

Training for caregivers was identified as an important aspect of service delivery and care in old people's homes. This study established that most caregivers in old people's homes lacked basic training in elderly care. Apart from two caregivers in government run old people's homes and another four in FBO run homes, who had undergone some training in psychosocial counselling, the rest had not been accorded any training. A caregiver at Maramba old people's home remarked:

> *There has been a lot of orientation and training organised by the Ministry on looking after children, but none on looking after the elderly. I think we need skills in care for the elderly, like is the case with children. We need training and capacity building. So far we have never been called for any training. Everybody should know how these homes operate and how to run them. Government should do more for the aged living in old people's homes.*

The District Social Welfare Officer for Western province pointed out that the then Ministry of Community Development and Social Services, with the assistance of United Nations Children's Fund (UNICEF), had conducted a lot of capacity building and training of staff but that this was mainly for those working in institutions for children. This indicated that not much had been done to train staff on how to care for the aged residing in old people's homes. The officer explained that caregivers had been asking for capacity building and training so that they could get necessary skills in elderly care, but that their request had not been favourably considered.

The challenge of lack of training opportunities for caregivers was also highlighted by the Chief Planner at the MCDMCH headquarters who stated:

> *There is lack of trained staff, especially in privately owned old people's homes. There is also lack of specialised training for the care of senior citizens, which is badly needed. There is need for trained personnel in health and especially geriatrics to be attached to the home. Homes should have geriatric clinics with specialists in charge. These are currently missing. Besides, very few medical practitioners specialise in geriatrics in Zambia, hence this service lacks at the moment. All old people's homes should be run by trained and appropriately qualified caregivers.*

Despite the general absence of training opportunities for caregivers in most old people's homes, it was established that Mitanda old people's home had been trying, even with financial limitations, to build capacity in its staff by exposing them to some kind of training.

The caregiver observed:

> *In terms of capacity building, Mitanda offers training programmes in aspects of residential care, catering, domestic work, gardening and maintenance to some of its workers.*

Furthermore, a caregiver at St. Therese's Village explained that two caregivers had been trained in palliative care which she said had many components of elderly care. She explained that one of the nurses had also undergone training in psychosocial counselling. All in all, however, caregivers in most old people's homes in Zambia were never exposed to training of any kind *vis-à-vis* caring for the aged.

**Discussion of Findings**

This section presents the discussion of findings as they relate to the literature. This is done according to the themes that emerged in the findings.

**Activities of the Aged in Old People's Homes**

The study revealed that the majority of the aged in old people's homes in Zambia spent most of their time idling, which could have negative consequences on their health and wellbeing. There seems to be a general notion that the institutionalised aged need only basic necessities such as food, shelter and health, while neglecting other important aspects of life like leisure and education. The aged must be acknowledged as integral members of society and must have the right to enjoy a good quality of life and full equity in access to all services necessary for optimal health (World Health Organisation, 2004). This entails that the aged, regardless of their circumstances in life, are entitled to care and support by society in order to live more positively.

The institutionalised aged could greatly benefit from leisure and learning activities. Ala-Mutka & Punie (2007) point out that learning is a way for older people to stay active, to participate in society and to share the knowledge and experience gained in their lives. They also state that learning can enrich the quality of life for older people as well as the people interacting with them and learning from them. Therefore, leisure and learning opportunities should be provided to the willing and capable older persons. National Institute of Adult Education (2010) asserts that for older people, taking part in activities can improve their memory and dexterity. It can also increase their appetite, give them greater levels of confidence, or just make them smile and enjoy life more. The findings of this study are not in conformity with activity theory.

**Adult Education Programmes Provided to the Aged**

The study established that very few adult education programmes were provided to the aged in old people's homes. Out of the nine old people's homes in Zambia, only four offered some form of adult educational programmes in areas such of agriculture, hygiene, nutrition, knitting, HIV/AIDS awareness and religious knowledge. These programmes fall under the rubric of traditional non-formal adult education. According to Nafukho, Amutabi & Otunga (2005), non-formal adult education is learning that takes place outside formal learning institutions and is specifically meant for adult learners. It involves the education provided to adults by non-governmental and private organisations, for those adults interested in acquiring specific knowledge and skills for life improvement. This is also in line with Alfageme (2007) who asserts that educational programmes aimed specifically at older people could be in the non-formal learning environment and that these programmes could not necessarily be provided by education or training centres.

In Zambia, the non-formal adult education programmes need to be rolled over to all old people's homes in an institutionalised framework in order to enhance the quality of life of the aged and keep them active. Ala-Mutka & Punie (2007) agree with this view when they point out that in general, older people's learning motivation is related to improving their everyday lives, to keeping themselves active and to sharing their knowledge and to connecting with other learners.

**Participation in Adult Education Programmes by the Aged**

The study discovered that most of the aged in old people's homes in Zambia were willing to participate in adult education programmes. This is in line with Grandal (2008) who asserts that many elderly individuals demonstrate great interest and ability to learn new information and that ageing should not be seen as purely a time for decreased abilities but rather as an opportunity for growth, increased wisdom and the attainment of new skills. Shikur (1997)

adds that the important principle of adult education relates to the strong belief in the educability of humankind and that adult education basically negates the belief that learning is possible only in childhood and not later in adult life.

The aged in old people's homes who had expressed willingness to participate in educational programmes were asked to indicate the learning areas they would like to participate in. Most of them indicated practical skills such as basket making, knitting, tailoring, gardening and livestock rearing which they said would directly benefit them. This showed that the aged are mostly interested in learning things that are relevant to their lives and are practical nature. This supports the researchers' advocacy for new terrains in adult education that should be rolled over to all old people's homes in Zambia in the framework of lifelong learning.

The elderly respondents who indicated that they would not want to participate in educational programmes gave old age as their main deterrent. This is in agreement with Grandal (2008) who points out that despite new currents and thinking *vis-à-vis* education and ageing, older people continue to be denied learning opportunities or they reject them themselves on the belief that it becomes more difficult to learn with age. The other reason the aged gave for not wanting to participate in educational programmes was poor eyesight, failing health and lack of motivation. However, Oyedeji (1992) contends that adults, in spite of the impairments they suffer, do accumulate experiences in their social, political, economic, cultural, religious and other interactions and these experiences appreciate to more than make up for the physiological and mental impairments.

**Training of Caregivers in Old People's Homes**

The study revealed that training opportunities for caregivers were not readily available in most old people's homes in Zambia. It showed that most caregivers working in these homes had no training in caring for the aged. This is confirmed by Kamwengo (1999) who asserts that many caregivers in both the community and homes for the aged in Zambia lack skills and knowledge for effectively working with and for the aged. Clare (2007) posits that there is a need to train staff in long-stay care homes in nutrition and dietetic services menu planning, appropriate prescribing of nutritional supplements and weight management of residents. Nyanguru (1991) agrees with the view that there is need to train people who work with the elderly in institutional homes. He states that they need simple physiotherapy skills, simple occupational therapy skills, general supervision of the elderly to prevent malnutrition and related aspects. He further observes that there is need for better understanding by staff of what constitutes proper nutrition for older people. The study, therefore, postulates that with training, caregivers could provide better care to the aged and enable them lead more meaningful lives.

**Conclusion**

The study concluded that the aged in old people's homes in Zambia were bored and not involved in stimulating and productive activities. It also established that they were mostly not provided with suitable adult education programmes. The study also concluded that the available adult education programmes were traditional, inadequate and did not inspire interest in the aged. The study further concluded that the participation in these programmes by the aged in old people's homes in Zambia was very minimal. It further concluded that adult education programmes for caregivers were not readily available, making it difficult for caregivers to provide suitable support to the aged. Finally, the study concluded that the aged

and caregivers in old people's homes in Zambia were aware of the need for provision of more appropriate adult education programmes. This entails the need to migrate from traditional adult education to the new terrains, which would support the institutionalised aged in the country.

**Recommendations**

Arising from the findings of the study and the discussion that ensued, the study recommends that:

1. Boredom and idling among the aged in old people's homes should be tackled by providing a variety of stimulating and productive activities.
2. Stakeholders should provide relevant and suitable adult education programmes in all old people's homes in Zambia
3. Stakeholders should provide appropriate training to all caregivers and officers working in old people's homes in Zambia.
4. Adult education providers in Zambia should include new types of adult education activities to cater for the aged in old people's homes.

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# FACTORS INFLUENCING STUDENT CHOICE OF THE RESEARCH SUPERVISOR: A STUDY OF DOCTORAL STUDENTS

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## Abstract
This study delved into the factors that influence choices of the research supervisors; and the kind of support, guidance, and information that doctoral students are provided before making their choices at Makerere University. It was prompted by the persistent complaints doctoral students have been raising against some of their supervisors whom sometimes they have out-rightly labelled as being incompetent or uncooperative. The study, approached from the positivist paradigm, was conducted using a descriptive cross-sectional sample survey design where both quantitative and qualitative data were collected from 48 Ph.2.96 students using an adapted semi-structured questionnaire. Data were analysed with the use of descriptive statistics, factor analysis, and content analysis techniques. Study findings revealed that: first, the supervisor' specialisation is the most important variable that influences choices of doctoral research supervisors at Makerere University (Mean=4.58; SD=.821), while the supervisor's tribe is the least considered variable (Mean=1.25; SD=.565). Second, three latent factors were found to significantly influence the student choice of the research supervisor at the University, starting with "expected supervisor-student relationships" (32.96%), followed by "supervisor competence" (17.78%), and finally, where the "supervisor is assigned to the supervisee by the institution or recommended by parents (or guardians)" (12.14%). Finally, it was established that the doctoral students were receiving inadequate support, guidance, and information before choosing or being assigned their research supervisors. Therefore, it was concluded that the factors that influence student choice of the doctoral research supervisor were multifaceted and desegregated. Second, doctoral students would prefer to work with supervisors that they have voluntarily chosen rather than those assigned to them by the institution or recommended for them by their parents (or guardians).The researcher thus recommends that Makerere University administrators should consider assigning doctoral students the supervisors that they have voluntarily chosen in order to ease tension between supervisors and supervisees; and improve the study climate for both existing and prospective doctoral students. Second, the University should empower coordinators (or deans) of school to address, on-the-spot basis, the supervisory problems that doctoral students may experience.

**Keywords**: choice, doctoral students, factors; research supervisors, university

## Introduction
Making a choice of any kind is never that easy. The challenge is more daunting if what one is meant to choose has a significant bearing on his/her wellbeing or success. Take the case of choosing a marriage partner, a business associate, or even a degree programme one is meant to pursue – all these choices are, in fact, challenging to make. However, the case of choosing one's doctoral research supervisor is equally not an easy one – something that prompted Lewis Wolport (cited in Killeya, 2008) to say, "Choosing a supervisor is tricky because you don't know much about them until you start working with them" (para.1). In this study, the researcher looked at the factors that influence student choice of the doctoral research supervisor at Makerere University; and the kind of support, guidance, and information that students are provided before making their choices. It was instigated by the persistent

complaints doctoral students have been raising against some of their supervisors whom sometimes they have out-rightly labelled as being incompetent, uncooperative or just ‘absentee-supervisors'. Yet, some of these doctoral students were granted the opportunity to choose their own research supervisors. The researcher wondered why some of the students were beginning to dislike their supervisors, yet some of them voluntarily chose those supervisors. The study intended to establish the factors that, in the first place, influenced their choices.

Historically, doctoral training has been research-based (MacDougall, 2014). As a result, research supervisors have often occupied centre-stage in the progress and eventual success of doctoral students (Ray, 2007). But the way doctoral research supervisors are acquired varies from institution to institution; and even within the same institution, different doctoral students may be assigned supervisors in different ways depending on the circumstances. Of course in relatively ideal situation, doctoral students have been left to choose who to work with as their research supervisors. However, in many cases, institutions assign supervisors to doctoral students in utter disregard to their preferred choices. Either way, there have often been challenges faced by both the students and the institution when it comes to choosing one’s doctoral research supervisor. The case of the doctoral students at Makerere University has not been an exception; thus, the genesis of this study.

At Makerere University, doctoral supervisors are either chosen or just assigned to the student by the school/department/institute (Makerere University, nd). But even when a student makes his/her choice, the prerogative to assign (or not) a student the particular supervisor depends, to a large extent, on the school/department/institute or that preferred staff. In some instances, students have not been assigned their preferred would-be supervisors due to diverse reasons. These kind of scenarios have often brought about problems between the student and supervisor especially when the two discover that they do not share common interests and work ethics (Ray, 2007). In fact, sometimes, the students are appointed a different supervisor altogether even when the student and his/her school/department/institute recommended a particular staff. These scenarios have happened because those who nominate supervisors are not necessarily the ones that appoint them. For instance, before the collegiate system of administration was introduced at Makerere in 2011, doctoral supervisors were generally “appointed by the Directorate of Research and Graduate Training on the recommendation of the Faculty/Institute/School higher degrees committee” (Makerere University, nd, p.16). But at times, the Directorate has not followed, strictly, the recommendations of the lower academic units. However, with the collegiate system in place, the appointment of supervisors have now been partially decentralised such that supervisors are “now nominated by the School academic board and appointed by the College Academic board” (Makerere University, nd,p.17). Yet in practice, the Directorate of Research and Graduate Training still continues to appoint research supervisors especially for the students pursuing Ph.D programmes by research only. Despite these changes, the problem of choosing or being assigned a doctoral research supervisor at the University still persists; thus, the need for this study.

Overall, this study aimed at investigating the factors that influence student choice of the doctoral research supervisor at Makerere University; and the kind of support, guidance, and information that students are provided before they make their choices. On the basis of these research objectives, the researcher formulated two research questions to guide the study,

namely: (i) What factors influence student choice of the doctoral research supervisor at Makerere University; and (ii) What kind of support, guidance, and information are being provided to the doctoral students before they make their choices of research supervisors?

**Theoretical Framework**

There are a number of theories that scholars have advanced to explain how individuals make choices of different kind. This study, however, was modelled on the rational choice theory (RCT). The actual origin of the RCT is still shrouded in controversy. However, Oppenheimer (2008) points out that the RCT could have stemmed from the work of Thomas Hobbes who tried to explain the basic functioning of political institutions via individual choices. This effort, Oppenheimer reveals, was later continued by other classical economists such as Adam Smith, John Stuart Mill and many others. The RCT, according to Business Dictionary (2016), "attempts to explain all…social phenomenon in terms of how self-interested individuals make choices under the influence of their preferences" (para. 1). The theory states that when granted opportunity to make a choice of any kind, individuals will often weigh the benefits (advantages) and costs (disadvantages) of their choices before selecting that option that maximizes their gains and minimizes their losses (Levin & Milgrom, 2004). According to BusinessDictionary (2016, para. 1), the theory is premised on the following assumptions: "(1) human beings base their behavior on rational calculations, (2) they act with rationality when making choices, (3) their choices are aimed at optimization of their pleasure or profit." These assumptions, the researcher believed, could be applicable if the doctoral students were granted the opportunity to choose their own would-be research supervisors.

The researcher preferentially opted to use the RCT in the study for two main reasons. First, the theory has already been successfully applied in other fields of research including economics, marketing as well as is international relations (Oppenheimer, 2008). These fields of knowledge are closer to education, the context of this study. Second, the researcher hypothesised that when doctoral students are granted the opportunity to choose their research supervisors, the tendency to compare the benefits and costs of working with supervisor A rather than B naturally occurs. In that regard, the student is bound to choose the supervisor he/she believes would benefit him/her more; thus, making a rational choice. The researcher, however, chose this theory well aware of its inherent shortcomings. For instance, an individual can only make a rational choice if he/she has complete and accurate information about the situations under which he/she is making the choice. Such an assumption can be unrealistic if we take the conditions under which doctoral students make choices of their own research supervisors. Nevertheless, the researcher still believed that the RCT would provide a logical theoretical perspective (or 'lens') from which to understand the problem that was investigated.

**Literature Review**

Several scholars have already looked into the issue of how students of different levels of education make choices of different kind - including how they may choose their higher education institutions, degree programmes, careers, subject combinations as well as research supervisors. Despite the challenge doctoral students face in choosing their research supervisors, studies have revealed that several students are still able to successfully select their supervisors, other factors notwithstanding (Ray, 2007; MacDougall, 2014; Lei & Hu, 2015). According to Ray (2007), student choice of the doctoral supervisor depends on factors such as the "professors' reputation, knowledge and matching of interests among others"

(p.23). MacDougall (2014) however says that students commonly consider the availability and competence of the supervisor to handle their research projects when selecting them. Besides, MacDougall adds that the students also consider the "research supervisor attributes, behaviours and experiences" (p.75). Lei and Hu (2015) on the other hand reveal that the factors that critically influence the student choice of the doctoral supervisor include factors such as the supervisor's publications in one's area of research as well as his/her ability to bolster the student' scholarly publishing. However, these studies were carried out mostly in the context of developed nations – a setting that is different with that of the current study.

## Methodology

This study was approached from the positivist research paradigm although both quantitative and qualitative methods of data collection were employed. This was occasioned by the researcher's belief that knowledge is real and concrete, and with the use of appropriate instruments and design, it would be possible to establish what is true (or false) about the issue under investigation. With regards to this study, the researcher believed that the respondents who happened to be doctoral students at Makerere University know the factors that influence them to choose supervisor A rather than B. Thus, the positivist research approach would help yield valid findings. Specifically, the researcher employed the descriptive cross-sectional sample survey design. The descriptive design was opted for because the study was aimed at investigating the factors that influence the student choice of the doctoral research supervisor. This design was suitable as compared to other designs such as the correlational design that would work better if the study was focused at investigating only relationships between the study variables. The design was cross-sectional because the researcher aimed at collecting data from a cross-section of the target population at one point in time in order to avoid wasting time returning to the field to collect additional data that would make the process rather time consuming and costly. In addition, using the survey design also helped to collect data from just part of the study population; but still, allowed for the generalisation of the study findings to the entire targeted population of doctoral students at Makerere University. In fact, data were collected from 48 Ph.D students drawn from across the entire University using survey method. The survey tool was adapted from previous studies (Kinyota, 2013), and data analysis was conducted using descriptive statistics, factor analysis, and content analysis techniques. The sample size of 48 participants was considered adequate for this study since Roscoe (1975 cited in Sekaran, 2003) recommends a sample size of between 30 and 500 to be appropriate for most research. In the ensuing section, the researcher presents the findings of the study.

## Results

### *1. Demographic Data*

This paper looks at the factors that influence student choice of the doctoral research supervisor at Makerere University. In this section, the results of the study are presented in accordance with the research questions that guided the investigation. First, a description of the characteristics of the study respondents in terms of their gender, study programme, and year of study is presented in Table 1.

**Table 1: Distribution of respondents by their background characteristics**

| Background Characteristics | Attributes | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Sex of Respondents | Male | 29 | 60.4 | 60.4 |
| | Female | 19 | 39.6 | 100.0 |
| | Total | 48 | 100.0 | |
| PhD Programme | Education | 16 | 33.3 | 33.3 |
| | Dev't Studies | 13 | 27.1 | 60.4 |
| | Agric. | 17 | 35.4 | 95.8 |
| | Not specified | 2 | 4.2 | 100.0 |
| | Total | 48 | 100.0 | |
| Year of Study | First | 15 | 31.3 | 31.3 |
| | Second | 19 | 39.6 | 70.8 |
| | Third | 8 | 16.7 | 87.5 |
| | Beyond three | 6 | 12.5 | 100.0 |
| | Total | 48 | 100.0 | |

The results in Table 1 indicate that of the 48 students who participated in the study, 60.4 percent (29) were males. The remaining 39.6 percent (19) were females. This finding was in agreement with the enrolment records in the Department of the Academic Registrar which showed that there were more male students enrolled on the PhD programmes at Makerere University than their female counter-parts (Department of the Academic Registrar, Makerere University, 2015). In terms of programme of study, agriculture (35.4% or 17) and education (33.3% or 16) students dominated in the study (68.8% or 33). These were followed by 13 (27.1%) PhD students who were registered on Development Studies programme. The least number of student respondents (2 or 4.2%) were drawn from unspecified programmes. This could have been comprised of individuals who were not yet enrolled on any specific doctoral programme since much of the data was collected during a doctoral colloquium held at the College of Education and External Studies, Makerere University. This finding was also in consonant with the enrollment data in the Department of the Academic Registrar which revealed that there were more PhD students enrolled in the College of Agriculture and Environmental Sciences (CAES) and College of Education and External Studies (CEES) respectively (Department of the Academic Registrar, Makerere University, 2015). Finally, in terms of year of study, the majority of the respondents were second year students (19 or 39.6%). These were followed by students of first (15 or 31.3%), third (8 or 16.7%) and more than 3 years (6 or 12.5%). The dominance of the second and first year students respectively in the study was as a result of their presence on campus during the time of data collection. The third years and those on their study programmes beyond three years were students who were engaged in producing their dissertations (or theses) and they were rarely on campus during such times. Overall, the data for this study were collected from PhD students pursuing the taught-PhD programmes. Therefore, they were in position to provide valid and reliable information on how they ended up choosing academic staff A rather than B to serve as their research supervisor.

## 2. Factors that influence student choice of the doctoral research supervisor

The first question that this study sought to answer was stated as: "What factors influence student choice of the doctoral research supervisor at Makerere University?" To answer this research question, the researcher first used descriptive statistics that helped to compare which

of the individual studied factors most influenced the student choice of the doctoral research supervisor at the University. The results are presented in Table 2.

**Table 2: Respondents' ratings of factors influencing choices of research supervisors**

| No. | Questionnaire Items You considered … of supervisor | SD (1) | D (2) | U (3) | A (4) | SA (5) | Mean | SD |
|---|---|---|---|---|---|---|---|---|
| 1 | Gender | 35 (72.9%) | 8 (16.7%) | 1 (2.1%) | 3 (6.3%) | 1 (2.1%) | 1.48 | .967 |
| 2. | Age | 29 (60.4%) | 14 (29.2%) | 2 (4.2%) | 3 (6.3%) | 0 (0.0%) | 1.56 | .848 |
| 3. | Religion | 39 (81.3%) | 7 (14.6%) | 1 (2.1%) | 0 (0.0%) | 1 (2.1%) | 1.27 | .707 |
| 4. | Tribe | 39 (81.3%) | 6 (12.5%) | 3 (6.3%) | 0 (0.0%) | 0 (0.0%) | 1.25 | .565 |
| 5. | Home background | 35 (72.9%) | 10 (20.8%) | 3 (6.3%) | 0 (0.0%) | 0 (0.0%) | 1.33 | .595 |
| 6. | Good r/ships | 5 (10.4%) | 1 (2.1%) | 4 (8.3%) | 14 (29.2%) | 24 (50.0%) | 4.06 | 1.278 |
| 7. | Recommended by parents | 37 (77.1%) | 7 (14.6%) | 1 (2.1%) | 2 (4.2%) | 1 (2.1%) | 1.40 | .893 |
| 8. | Completing programme | 3 (6.3%) | 5 (10.4%) | 1 (2.1%) | 13 (27.1%) | 26 (54.2%) | 4.13 | 1.248 |
| 9. | Supervisor' specialisation | 1 (2.1%) | 1 (2.1%) | 1 (2.1%) | 11 (22.9%) | 34 (70.8%) | 4.58 | .821 |
| 10. | Supervisor's publications | 1 (2.1%) | 1 (2.1%) | 8 (16.7%) | 22 (45.8%) | 16 (33.3%) | 4.06 | .885 |
| 11. | Supervisor's capability | 2 (4.2%) | 0 (0.0%) | 1 (2.1%) | 18 (37.5%) | 27 (56.3%) | 4.42 | .895 |
| 12. | Supervisor taught me | 3 (6.3%) | 3 (6.3%) | 2 (4.2%) | 21 (43.8%) | 19 (39.6%) | 4.04 | 1.129 |
| 13. | Recommended by students | 8 (16.7%) | 4 (8.3%) | 4 (8.3%) | 23 (47.9%) | 9 (18.8%) | 3.44 | 1.351 |
| 14. | Recommended by friends | 12 (25.0%) | 18 (37.5%) | 6 (12.5%) | 7 (14.6%) | 5 (10.4%) | 2.48 | 1.304 |
| 15. | Supervisor talked well about | 8 (16.7%) | 4 (8.3%) | 3 (6.3%) | 22 (45.8%) | 11 (22.9%) | 3.50 | 1.384 |
| 16. | Supervisor just assigned to me | 15 (31.3%) | 13 (27.1%) | 9 (18.8%) | 6 (12.5%) | 5 (10.4%) | 2.44 | 1.335 |

The results in Table 2 indicate that supervisor' specialisation is the most important variable that influences student choice of the doctoral research supervisor at Makerere. It has the highest mean of 4.58 with a standard deviation of .821. This is followed by the consideration doctoral students give to the supervisor's capability which has a mean score of 4.42 with a

standard deviation of .895. Meanwhile, the factor that least influences the student choice of the doctoral research supervisor at the University is the supervisor's tribe that has a mean score of only 1.25 with a standard deviation of .565. This is followed by the consideration doctoral students give to the supervisor's religion which also has a mean score of only 1.27 with a standard deviation of .707. These findings generally imply that the majority of students first consider factors that enable the supervisors to competently perform their supervisory roles rather than the relationships they may have with them.

However, to analyse further the factors that influence student choice of the research supervisor at Makerere, the researcher employed factor analysis. According to Yong and Pearce (2013), factor analysis is a method of data reduction that helps to investigate underlying unobservable (or latent) variables that are reflected in the observable variables (or manifest variables) that account for variations in something. The technique is suitable where the independent and dependent variables are not segregated – just like in this case where the researcher adapted a survey tool from Kinyota (2013) that directly links the two variables. But, before conducting the factor analysis, the researcher first carried out a Kaiser Meyer Olkin (KMO) test - a test intended to measure the sampling adequacy of the study - bearing in mind that only 48 respondents participated in the investigation. The results of the KMO test is presented in Table 3.

**Table 3: Results of the sample adequacy test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin | Measure of Sampling Adequacy | .643 |
| | Approx. Chi-Square | 187.559 |
| Bartlett's Test of Sphericity | df | 55 |
| | Sig. | .000 |

The results in Table 3 show that the KMO measure for this study sample was 0.643; and since it was well beyond the critical value of 0.5 – the minimum coefficient of KMO that is recommended in survey studies of this kind by Kaiser (as cited in Field, 2005), the data was thus considered acceptable for further factor analysis.

Once the sample adequacy was validated, the researcher then proceeded to test for communalities to determine those factors that needed to be dropped from further factor analysis. Generally, communality values show how much of the variance in a factor is accounted for in the sample (Yong & Pearce, 2013). The results of the communality test are presented in Table 4.

**Table 4: Communality test results**

| | Initial | Extraction |
|---|---|---|
| I considered good work relationship | 1.000 | .549 |
| My parents or guardian recommended supervisor | 1.000 | .479 |

| | | |
|---|---|---|
| I considered time for completing programme | 1.000 | .501 |
| I considered the supervisor' specialization | 1.000 | .772 |
| I considered the supervisor's publications in area of study | 1.000 | .740 |
| I was sure about the supervisor | 1.000 | .677 |
| Supervisor taught me | 1.000 | .487 |
| Supervisor was recommended by earlier students | 1.000 | .758 |
| Supervisor was recommended by friends | 1.000 | .567 |
| Supervisor is talked well about by other students | 1.000 | .761 |
| Supervisor was assigned to me by institution | 1.000 | .627 |

Extraction Methods: Principal Component Analysis

The results in Table 4 indicate that all the factors that were considered in the study (minus factors on personal characteristics that were measured categorically; and therefore, would not fit factor analysis) at this stage had communality values that were significantly accounted for. As a result, the researcher considered all the factors in Table 4 worthy for further factor analysis since their values were all above 0.5 - except the variables "My parents or guardian recommended supervisor (.479); and "Supervisor taught me" (.487). However, since their communality scores were still nearer 0.5, the researcher went ahead to consider them for further factor analysis. This happened because Yong and Pearce (2013) recommends a communality value of 0.5 as the minimum coefficient required for factor analysis; or else, the variable is removed from further steps in factor analysis.

After the communality test, variance in the factors was extracted using eigenvalues. According to Yong and Pearce (2013), the Eigenvalue reflects the number of extracted factors whose sum should be equal to number of items which are subjected to factor analysis. The results for the communality test are presented in Table 5.

**Table 5: Results of Principal Component Analysis**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1. | 3.625 | 32.96 | 32.96 | 3.625 | 32.96 | 32.96 | 3.198 | 29.07 | 29.07 |
| 2. | 1.956 | 17.78 | 50.74 | 1.956 | 17.78 | 50.74 | 1.862 | 16.93 | 46.00 |
| 3. | 1.336 | 12.14 | 62.88 | 1.336 | 12.14 | 62.88 | 1.856 | 16.88 | 62.88 |
| 4. | .920 | 8.37 | 71.24 | | | | | | |
| 5. | .852 | 7.75 | 78.99 | | | | | | |
| 6. | .645 | 5.87 | 84.86 | | | | | | |
| 7. | .493 | 4.49 | 89.34 | | | | | | |
| 8. | .445 | 4.05 | 93.39 | | | | | | |
| 9. | .329 | 3.00 | 96.39 | | | | | | |
| 10. | .267 | 2.42 | 98.81 | | | | | | |
| 11. | .131 | 1.19 | 100.00 | | | | | | |

Extraction Method: Principal Component Analysis

The results in Table 5 indicate that the first factor accounts for 32.96% of the variance; the second 17.78%, and the third 12.14%. These suggested that there were only three significant components/factors that influence the student choice of the research supervisor at Makerere University. Thereafter, the researcher extracted the values of each of the manifest factors in order to determine the unobservable (or latent) factors that influence the student choice of research supervisors using further factor analysis. Table 6 below shows the loadings of the 11 variables on the three factors extracted.

**Table 6: Results of principal component analysis**

| | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| I considered good work relationship | .632 | | |
| My parents or guardian recommended supervisor | | .611 | |
| I considered time for completing programme | | .547 | |
| I considered the supervisor' specialization | | | .652 |
| I considered the supervisor's publications | | | .630 |
| I was sure about the supervisor | .743 | | |
| Supervisor taught me | .669 | | |
| Supervisor was recommended by earlier students | .800 | | |
| Supervisor was recommended by friends | .609 | | |
| Supervisor is talked well about by other students | .762 | | |
| Supervisor was assigned to me by institution | | .631 | |

Extraction Method: Principal Component Analysis

Finally, the results of the component analysis above was rotated. This was done in order to reduce the number of factors on which the variables under investigation have high loadings (Yong & Pearce, 2013). The results of the rotated component analysis are presented in Table 7.

**Table 7: Results of rotated component analysis**

| | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| I considered good work relationship | .667 | | |
| My parents or guardian recommended supervisor | | | .690 |
| I considered time for completing programme | | | -.540 |
| I considered the supervisor' specialization | | .866 | |
| I considered the supervisor's publications | | .858 | |
| I was sure about the supervisor | .627 | | |
| Supervisor taught me | .667 | | |
| Supervisor was recommended by earlier students | .822 | | |
| Supervisor was recommended by friends | .588 | | |
| Supervisor is talked well about by other students | .823 | | |
| Supervisor was assigned to me by institution | | | .771 |

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

The results in Table 7 indicate that "Supervisor is talked well about by other students"(.823); "Supervisor was recommended by earlier students"(.822); "I considered good work relationship"(.677); "Supervisor taught me" (.667); "Supervisor was recommended by friends" (.588); and "I was sure about the supervisor" (.627) are substantially loaded on Factor (Component) 1. On the other hand, "I considered the supervisor's publications in my area of study" (.856) and "I considered the supervisor' specialisation" (.866) were substantially loaded on Factor 2. All the remaining variables were substantially loaded on Factor 3. In this study, the first factor, can thus be regarded 'expected supervisor-student relationships' because items like "Supervisor is talked well about by other students"; "Supervisor was recommended by earlier students"; "I considered good work relationship"; "Supervisor taught me"; "Supervisor was recommended by friends"; and "I was sure about the supervisor" substantially loaded it. Meanwhile, the second factor can best be called 'supervisor competence' because items like "I considered the supervisor's publications in my area of study" and "I considered the supervisor' specialisation" loaded highly on it. The third factor has to do with "supervisors being assigned to the supervisee by the institution or recommended by parents/guardians". In such scenario, the student has limited influence over the choice of his/her doctoral research supervisor.

**3. Nature of support, guidance, and information provided to doctoral students while choosing research supervisors**

The second question that this study sought to answer was stated as: "What kind of support, guidance, and information are provided to the doctoral students before they make their choices of research supervisors at Makerere University?" Data on this second question were gathered through the use of open-ended items of the adapted questionnaire. First, on the issue of "when and from whom did you get the information that someday you will be required to make choices of your research supervisors?" different students gave diverse answers. Some said they got it during "seminar", others said "at the orientation briefing" while some said "in class during the first lecture". Some other students said they got the information "from the Ph.D Guideline of Mak CHS". This means that they obtained the information from the Ph.D guideline of Makerere's College of Health Sciences. Others actually said they were "informed by officials at the Directorate of Research and Graduate Training of the University". One respondent instead reported that she "learnt about it from the Coordinator" of her School. These findings imply that there is no unified source of information pertaining to how doctoral students at Makerere University get to know about how they will choose or be assigned their doctoral research supervisors.

Second, on the issue of "who encouraged you to choose your research supervisor", the respondents also gave diverse responses. One said, "no one advised me on whom to choose. I just made my choice depending on what I had seen and heard about my supervisors". Another one said her "Dean of the School" advised her on who to choose, while many other respondents reported that they were "encouraged by their classmates". Another respondent said, "I was encouraged by the supervisor himself" while another respondent said, "I was guided by the Coordinator of our School". These responses suggest that different parties encourage students to choose their research supervisors basing on diverse reasons.

Third, on whether "you are comfortable with your current supervisors and would not wish to change", some respondents said they were satisfied with their research supervisors while

others said they regret their choices. One respondent for instance said, “My supervisor has no time for me. I would wish to get a new supervisor”. Another one said, “My supervisor is beginning to behave funnily towards me - a move I am not comfortable with”. The same respondent asked: “Why does my supervisor always ask to meet me outside his office including in hotels?” Another respondent revealed that “I have found out that one of my supervisors is not of much help to me. His specialisation and interest differ with mine”. This means that student choices of research supervisors depend on several factors; but sometimes, the choices are not based on critical considerations.

Finally, on whether “there is any programme that the school/department offers to help students during the process of choosing their research supervisors”, one student said “Yes. We are advised to contact the possible supervisors beforehand”. While another respondent said, “No. It is first announced; but it depends on you the student to find help from anywhere” (Sic). One respondent meanwhile said, “When I had problem with my former supervisor, I was assisted by the Directorate of Research and Graduate Training. They wrote for me a letter which I delivered to my dean; and shortly, I was assigned a new supervisor”. These findings suggest that there are certain support services that are offered to doctoral students with regard to supervision, but many students do not seem to be conversant with institutionalised procedures they can follow to get support and guidance during the process of selecting /or changing their research supervisors at the University.

**Discussion**

This study aimed at establishing the factors that influence student choice of the doctoral research supervisor; and the kind of support, guidance, and information the students are provided before they make their choices at Makerere University. The study made three key findings. First, that several factors influence the student choice of the doctoral supervisor – key among them are the supervisor’ specialisation (.772); supervisor talked well about by other students (.761); supervisor’s publications (.740), and being recommended by other students (.758). Second, the study established that the first latent factor that doctoral students consider while choosing their supervisors is the “expected supervisor-student relationship” (3.96%). This was followed by the “supervisor competence” (17.78%); and finally, “where the supervisor is assigned by the institution or recommended by parents (or guardians)” (12.14%). Third, the study established that the doctoral students were receiving inadequate support, guidance, and information before choosing or being assigned supervisors.

The finding that “expected supervisor-student relationship” is the first latent factor that influences student choice of the doctoral research supervisor is a bit strange. This is because, many earlier studies had hinted on “supervisor competence” as being the major factor that influences student choice of the doctoral supervisor (e.g. Ray, 2007; MacDougall, 2014). But, in the case of this study, the study participants laid emphasis on the “expected supervisor-supervisee relationship” - most likely because in the recent past, there have been rampant reports in Makerere about supervisors who abandoned their supervisees during the course of their study due to diverse reasons. These kind of occurrences create fear and make students become rather careful about the type of academic they can choose as their supervisors; thus, the genesis of this kind of result.

The study also discovered that the participants were receiving inadequate support, guidance, and information before choosing or being assigned research supervisors. This finding was in agreement with that of other studies (e.g. Ives & Rowley, 2005; Zhao, Golde & McCormick,

2007). In universities that are understaffed like Makerere, it is possible for doctoral students to receive less support and guidance because the few staff can always get overwhelmed with the ever-growing numbers of graduate students being enrolled in the institutions.

**Conclusion**

On the basis of the above findings and subsequent discussion, the researcher concluded that the factors that influence the choices of the doctoral research supervisors are multifaceted and desegregated and that certain factors influence student choices more than others. Besides the observable factors, there are also manifest factors that influence students' choices of a doctoral research supervisors at Makerere University. Finally, doctoral students would prefer to work with supervisors that they have voluntarily chosen rather than those assigned to them by the institution.

**Recommendations**

Following the discussion of findings and the conclusions drawn, the researcher recommends that Makerere University administrators should consider assigning doctoral students the supervisors that they have chosen in order to ease any possible tension that may arise between them and their supervisors. This would not only enhance institutional harmony, but it would also improve the study climate for both existing and prospective doctoral students. Second, the University should empower coordinators (or deans) of school to address, on-the-spot basis, the supervisory problems that doctoral students may experience.

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# THE IMPACT OF ELEARNING ON HIGHER EDUCATION TRANSFORMATION IN SOUTH AFRICA

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**Abstract**
The South African education system has been going through a number of transformation processes post 1994. These processes are an attempt to improve and provide quality education which in turn leads to well-skilled individuals ready to enter the corporate world. One of the main transformation processes involves Information Communication Technology (ICT) which has led to the introduction of electronic learning (eLearning) in education settings. ICT has not only changed the way society preserves and/or accesses knowledge and information but has also facilitated the restructuring and transformation of the traditional models of Higher Education Institutions (HEIs). Furthermore, introduction of eLearning evolved around a number of challenges facing the traditional models of learning in HEIs. To deal with these challenges, an effective and efficient way of educating had to be introduced. ELearning has been beneficial to HEIs as it allowed universities to have a greater geographical reach. This paper examines how eLearning has transformed education which includes the definition of transformation; social transformation; the process of transformation in education; defining and providing an understanding of what eLearning is; challenges that the education systems was facing prior to eLearning; the growth of eLearning and how eLearning benefits HEIs and the corporate world. Due to the findings the paper ends with recommendations.

**Keywords:** Information Communication Technology, Higher Education Institutions, eLearning, Transformation, Social Transformation, Corporate World

## Introduction

Universities worldwide are facing new and challenging distributed knowledge production systems and for this reason they are searching for ways in which they can improve their competitiveness. They are looking for innovative ways to improve the quality of their activities. As a result universities are using technology to enhance and improve the quality of education (Mlitwa, 2006). There has been a change over the past 15 years on the process of how information is transferred (Nagy & Berschutz 2015). According to Jaffer, Ng'ambi and Czerniewicz (2007) integration of ICT in the current learning environment is necessary in order for South African universities to compete globally. There is a paradigm shift in global society which is moving away from competitive advantage based on capital to competitive advantage based on information and knowledge through innovation and creativity (Mlitwa, 2006). The knowledge society leads to new dimensions in the learning process (Dorobat, 2014). For this reason, education is a necessity hence HEIs are undergoing transformation.

The development of human resources is relevant in the effort to eradicate poverty and to ensure broad socio-economic development. Creation of effective human capital is possible through improved education (Evoh, 2007). According to Ellis and Kuznia (2014) there is an increase in the demand for alternative approaches to learning. The main objective of higher education institutions (HEIs) is to provide knowledge of all forms which is advanced and effective (Mlitwa, 2006). Therefore, universities must play an important role to ensure that

there is development of an information society. The universities who fail to embrace technology will lag behind in developing technology and the quest for globalisation (Singh, O'Donoghue, Worton, 2005). The main aims of this research is to understand what impact eLearning has on HEI transformation in South Africa, to get an understanding of the challenges that are hindering on the implementation of eLearning and to recommend a way forward for South African Universities together with the policy makers.

**Transformation**

According to Picciano, Seaman and Allen (2010) the word 'transform' has two basic meanings which are "a complete change" or "to change the outward form of appearance". 'Transformation' is "enhancing or expanding on what is being done". It is change that occurs in a large scale. Picciano et al. (2010) further state that for transformation to take place policy and funding issues need to be attended to. In South Africa transformation of higher education did not change education completely, rather it enhanced education. One of the ways transformation has enhanced education is through the use of Information Communication Technology (ICT). There is a paradigm shift from the traditional teacher centred classroom based learning to student centred learning which is technology based. Figure 1 illustrates how technology has transformed education.

Figure 1: How technology has transformed education
Source: Adopted from Welearnindia, 2014

Previously education was based on the classroom set up where students carried many books to the classroom for reference. For instance, to find a definition of a word one had to have a dictionary at hand or go to somewhere like a library to find one. Currently, students can look up the word immediately on their smart phones which are very helpful technological tools for learning.

**Social transformation**

According to Jaffer et al. (2007) the use of ICT in education improves not only skills for the country but also social transformation. Ravjee (2007) states that ICT does not operate independently. There are socio-economic, ideological and educational factors that play a role in bringing about social transformation which then inform education transformation. The HEIs in South Africa have to meet social transformation and skills needs. This brings a lot of pressure to bear on HEIs as they also have to ensure that there is an increase in demographic representation amongst graduates. One of the elements of social transformation is the

emergence of the 'digital native' generation i.e. learners between 18 and 24 years who were born in the digital era and are completely comfortable with it (Jaffer et al., 2007). Thus, social transformation is a driver for HEI transformation. At the same time, education is an important tool for achieving social transformation (Jaffer et al., 2007).

**Policy on Transformation of Higher Education Institutions**

Mlitwa (2006) points out that the National Research Development Strategy emphasises the importance of higher education transformation so that society will master recent technologies and be able to incorporate them in their social activities. When South Africa gained independence in 1994, education policies focusing on equal opportunities for previously disadvantaged groups and encouraging access to education were formulated (Bagarukayo & Kalema, 2015). The curricula were transformed to be learner focused, so that learners could be equipped with the necessary skills which they will be able to apply in their real life situations. According to Bagarukayo and Kalema (2015), the White Paper on eEducation published by the National Department of Education in 2004 focused on the research and delivery needs associated with the implementation of eLearning in schools. The Green Paper on Higher Education Transformation (Department of Education, 1996) highlighted two challenges facing South African Higher Education Policy namely:

- Inequality, division and inefficiency. The main aim here is to increase access for woman and black students to education and for learning to reach and accommodate a larger population.
- The advancement of technology in a technologically oriented economy. The aim here is to equip members of society with the knowledge and skills to participate competitively in a rapidly changing world.

Considering these challenges, there is a need to transform the South African Higher Education Institutions so that HEIs can meet the purposes of Higher Education as outlined in the Green Paper on Higher Education Transformation (Department of Education, 1996) which are:

- To provide the labour market with employees who have a high level of expertise and competency as this is important for the modern economy growth and prosperity.
- To develop the intellectual abilities and aptitudes of individuals so that they can meet their needs and aspirations.
- To create, transmit and evaluate knowledge through research and teaching. It is important to ensure that there is continued pursuit of academic scholarship and scholarly analysis in all the fields of human understanding.
- To ensure that there is development of rational, responsible and constructive citizens who will be able to commit to the common good and to able to critically review ideas, policies and practices.

According to Miller, Benke, Chaloux, Ragan, Schroeder, Smutz and Swan (2014), eLearning leaders should be knowledgeable about the policy issues facing higher education. They need to understand how important it is to educate the policy makers on eLearning and how eLearning quality can be increased.

**Challenges facing HEIs**

The South Africa government was, and still is, faced with the challenge of including diverse groups in HEIs and of increasing students' participation so that they can provide the skills which are needed for a fast changing society (Jaffer et al., 2007). Racially divided and unequal education systems were among the many challenges that faced HEIs before the transformation process (Jaffer et al., 2007). The inclusion process has provided challenges related to the large number of learners who need to be taught (Jaffer et al., 2007).

**Transformation of the Educational Process**

The educational process has undergone a number of transformations worldwide, as shown in Figure 2.

Figure 2: Changes in the educational process
Source: Adopted from Brooks, 2012

According to Brooks (2012) learning has evolved from lecture style classrooms, collaborative classrooms, static online courses, interactive courses to, in some countries, gamified eLearning. These terms are explained briefly below.

- Lecture style classrooms is the traditional way of learning where the lecturer teaches students and in most cases learning is a one-way process from the lecturer to students.
- In collaborative classrooms, learning is mostly illustrated by a group of students working together in a classroom in search of understanding, meanings or solutions.
- Static online learning is when students learn using technological tools and involves the students working alone on the online coursework given to them. There is no interaction with other students online or any other online support.
- Interactive learning is what is currently being implemented in most HEI's and involves the use of interactive technology, for example the use of social networking as a means of learning.
- Gamified eLearning is a stage that many HEI's have not yet implemented and involves video games designed to motivate students. This method aims to increase the student's enjoyment and engagement.

**Information Communication Technology (ICT)**

Mlitwa (2006) states that, the 2001 National Plan for Higher Education proposes that HEIs equip all graduates with the necessary skills that they will need in contemporary society. These skills include ICT skills. Thus, ICT has a very important role to play in education (Jaffer et al., (2007). South African HEIs have incorporated ICT in learning through the use

of eLearning. Information Communication Technology is viewed as one of the threads in a complex net of transformation (Ravjee, 2007). A study was done in Saudi secondary schools where the success factors for ICT implementation were investigated. The results revealed that ICT was perceived as a necessity for improving performance, learning outcomes, collaboration and learning experience (Marshall & Taylor, 2015).

## ELearning

Mlitwa (2006) stated that the University of Pretoria's strategic plan defines eLearning as the use of technology to enhance the quality of education. Lestari (2016) supports this abovementioned statement as the author stated that eLearning is a tool which is useful when it comes to enhancing the quality of teaching and learning. Bagarukayo and Kalema (2015) define eLearning as the use of web tools in delivering educational activities. ELearning is a flexible way of learning in which ICT resources, applications and tools are utilized in order to interact and access information (Bagarukayo & Kalema, 2015). There is a demand from students, specifically those students who are employed, for an alternative to the traditional face-to-face learning because of their daily engagements which makes it difficult for them to attend classes. ELearning is therefore seen as one of the ways to meet this demand (Morris, 2013).

Miller et al. (2014) point out that most literature on online learning focuses on the micro level of teaching and learning. Their book fills this gap in literature by addressing the macro level, exploring how eLearning can be integrated into the HEI mainstream so that the important issue of sustainability as a key to success can be addressed. ELearning introduction as a means of improving education is a great initiative. It is however important to address the issue of whether it is sustainable which entails addressing eLearning on a macro level.

For eLearning to be effective there must be a process of quality assurance of online material and methodology to ensure that they meet certain quality standards. According to Marales, Dominguez, Tarkovska, (2015), there are standards which were laid down by the European Higher Education Area (EHEA 2009,2012). These standards seek to ensure that there are quality assurance procedures throughout the education system. The reason is to increase the competency of instructors and students in a way that their qualifications can be acknowledged in the European context so that there is quality in higher education programs.

The issues of learning and cost effectiveness need to be taken into account. Furthermore, the commitment of institutions is very important as this can make or break the eLearning process. ELearning should be accessible to all the stakeholders who use it and benefit from it. The faculty and students' satisfaction must be met because at the end of the day the implementer of eLearning is the staff and the students.

## Discusion

### Impact of eLearning on higher education

Information Communication Technology in education is viewed as a positive initiative. It is an important tool to address the ever changing needs of society when it comes to learning (Mlitwa, 2006). The impact of eLearning on higher education includes the following:

- Assists lecturers in testing students on real business situations and it is new method for evaluating students' learning (Singh, O'Donoghue, Worton, 2005).

- Empowers learners when it comes to problem solving skills and enables educators to be able to transfer and distribute knowledge and information in an efficient way (Bagarukayo & Kalema, 2015).
- Through eLearning there are discussion forums and chat rooms which promote creativity, flexibility, interaction, collaboration and communication and this in turn enriches the learning process (Bagarukayo & Kalema, 2015).
- With eLearning students are able to participate in group activities even if they are not in the same geographical area (Singh et al., 2005). This removes location constraints and allows students to study at their own pace and ability.
- ELearning has an impact on the rehabilitation of students living with disabilities (Singh et al, 2005).
- A study at UCT found that computer-assisted marking technologies allowed lecturers to get immediate feedback on learners' performance, and to have ongoing access to their progress. Some lecturers reported their observation that academic performance improved after online learning was introduced. The more familiar learners became with the online learning platforms the more they engaged academically (Bagarukayo & Kalema, 2015).
- According to Marikar and Jayarathne (2016), eLearning allows for different sorts of material to be distributed by teachers as well as real-time interaction.
- The introduction of eLearning has led to universities in different countries offering joint academic programs mostly at a post graduate level. In South Africa eDegree is operating internationally where online higher education is provided through partnerships with South African universities (University of Free State, Stellenbosch and UNISA) and universities in Kenya, Uganda, Tanzania and the United Kingdom (Ravjee, 2007).
- Students are able to gain educational experiences and to achieve life-long learning through eLearning and at the same time balance their work and life (Kim, Welch, & Nam, 2016). ELearning is more flexible from a time and location point of view compared to face-to-face learning.
- Revision and updating of content is easier when using eLearning technologies compared to using printed material (Ruiz, Mintzer, & Leipzig, 2006).

**Higher Education Institutions' Links with the Corporate World**

According to Collis (2005), eLearning in the corporate sector provides knowledge transfer through the computer meaning that the employee does not have to be physically present at a classroom session. ELearning supports the sharing and building of knowledge in an efficient way which is accessible to everyone in their workplaces. There is an indication that a business-focused approach to higher education together with the use of improved technology has led to there being more university-to-business alliances. Universities have used eLearning to increase their alliances with other organisation because of the social demands for knowledge. This may lead to universities maintaining market position (Singh et al, 2005). Some students enrol in HEIs with the aim of entering the corporate world as public servants, private company employees, entrepreneurs etc. There is however a need for learning in HEIs to be in line with the requirements of the corporate world. Most companies in this age are making use of technology as a means of working and HEIs that have introduced eLearning assist in equipping students who are future employees with the ICT skills that they will need to enter the labour market.

**ELearning at Higher Education Institutions in South Africa**

Bagarukayo and Kalema (2015) gathered information on eLearning in a several HEIs in South Africa, summarised in Table 1.

Table 1: eLearning Adaptation in South African HEIs

| HEI | eLearning Adaptation |
|---|---|
| University of Pretoria (UP) | One of the first universities to adopt eLearning in 1998. They started running distance programs from 1995 through the use of video conferencing, broadcasting, web-based courses and multimedia. |
| University of Cape town (UCT) | Started using web-based communication technology and Moodle in 2006. Their courses are designed using eLearning. They have involved educators in the decision making of learning management systems. Interviews conducted over a two-year period by 21 instructors in 4 different institutions in Western Cape Province found that at UCT instructors perceived eLearning as primarily an administrative tool where assignments can be submitted and managed rather than used in teaching as a primary goal. |
| Nelson Mandela Metropolitan University (NMMU) | Moodle learning iLearn is used for managing course activities such as assessments, grading, reporting and student tracking. This platform is however not very flexible because there is limited interactivity. |
| University of South Africa (UNISA) | ELearning is used to distribute resources and to facilitate interaction. Ninety six percent of students access the myUnisa platform and from that percentage 13% of students are involved in discussions and 64% are frequent users of the platform. This platform is currently being fully utilised to its potential whereas previously where it was mainly used for administrative purposes. |
| University of Kwazulu Natal (UKZN) | Started using Moodle as a platform for teaching and learning in 2010. The system allows for the instructors to upload notes, announcements, assignments and discussion forums. The challenge with this platform is that it is not used fully to its potential as there is no additional support for learners. |
| University of Western Cape (UWC) | Uses OSS KEWL, an eLearning system developed in-house. The challenge is the adaptation and usage of the system as academics are resistant to change. It lacks full interactive engagements. Interviews conducted over a two-year period by 21 instructors in 4 different institutions in Western Cape Province found that at UWC instructors perceived eLearning as primarily an administrative tool where assignments can be submitted and managed rather than used in teaching as a primary goal. |
| Tshwane University of Technology (TUT) | In 2011 electronic campus was replaced by MyTutor. This is where the instructor uploads notes assignments and grades. The TUT system has an online access of video tutorials. |
| University of Johannesburg (UJ) | They use learning management systems to offer extra support with online materials to large classes. |
| University of Stellenbosch (US) | Learner management system (eLearning) is compulsory as it forms part of the intake clause. There is however a challenge that there is minimal instructor engagements because the system was adopted without consulting academics. Interviews conducted over a two-year period by 21 instructors in 4 different institutions in Western Cape Province found that at US instructors perceived eLearning as primarily an administrative tool where assignments can be submitted and managed rather than used in teaching as a primary goal. |

### Challenges Affecting ELearning Implementation in HEIs

Generally learners in South Africa are faced with a number of challenges. These include, but are not limited to, different backgrounds, languages and racial groups, inequality, infrastructure shortages and challenges with access and skilled instructors (Bagarukayo & Kalema, 2015). According to Bagarukayo and Kalema (2015), challenges include educational inequalities, lack of resources, no institutional support, weak ICT skills and minimal internet access. In addition, the digital divide poses a challenge in provision of eLearning where there is unequal distribution of resources, including but not limited to hardware, software and internet connectivity (Ravjee, 2007).

As much as many academics view technology (eLearning) as an effective way to transform education there are, however, arguments that technology is no different from other tools. The argument goes further to indicate that teaching and learning are determined by a number of other factors including the content, the learner, the educator and the method (Mlitwa, 2006). According to some authors eLearning is as effective as the quality of the above mentioned factors. In other words, we can have all kinds of advanced technology but the way this technology is used is what matters the most (Bagarukayo & Kalema, 2015).

According to Collis (2005), eLearning has challenges and issues relating to costs of the electronic tools, management, monitoring and maintenance of these tools as well as security issues. Singh et al. (2005), stated that one disadvantage of eLearning initiatives is that this approach can upset lecturers who have to adapt and change their work patterns, which many are reluctant to do. Trying to get the university administrators and faculties to understand and accept the viability and value of eLearning can be very challenging and has an impact on the transformation process and implementation of eLearning in HEIs (Miller et al., 2014).

## Conclusion

It is clear that the use of ICT has given South African universities an opportunity to expand beyond their local campuses and to become global learning institutions (Singh et al, 2005). This is important especially in today's information and knowledge age. It is essential to note that the use of technology through eLearning is not there to replace the traditional learning process but to enhance and extend it. Higher education has always been affected by technological innovation but not as much as it is nowadays. This paper presented the kind of impact that ICT through eLearning has on transforming education. It is evident that eLearning has had a very positive impact in South African HEIs. It is however imperative to note that there are some disadvantages to eLearning. Disadvantages are not necessarily a negative impact. When there is a challenge in most cases challenges lead to creativity and innovation. The challenges for eLearning should not be seen as problems rather, but should rather be seen as an opportunity to improve. Since eLearning is still something very new in South Africa, in most universities it is still in the trial and error stage and can still be amended to meet the South African higher education purposes as highlighted in the Green Paper on Higher Education Transformation. Due to the challenges facing eLearning in South Africa, further studies should be conducted with the aim of understanding and minimising these challenges.

## Recommendations

According to Bagarukayo and Kalema, (2015), learning is a social process which is why social media can be used as a means of online learning. If learners are socially present (i.e. connected to each other via social media) this may decrease the loneliness of learning and increase the engagement and participation of learners. Since there is a large number of students who are socially present, HEIs should make use of this opportunity available to them and use social networks for teaching and learning.

It is recommended that the HEIs do not do away with traditional learning completely but rather use blended learning as transformation is still a process and has a long way to go. Blended learning in this case is the use of both face-to-face learning and eLearning.

The development of eLearning strategies should include engagements with all stakeholders together with lecturers and students with the aim of trying to minimise resistance to change in this regard. A study should be conducted where there is engagement with students and lecturers in all South African HEIs regarding their experience and their perception of eLearning, to find out if it is useful to them and to determine what percentage of students prefer eLearning as opposed to face-to-face learning and why.

Awareness campaigns regarding eLearning are necessary to make students aware of the eLearning opportunities available to them and how to utilise them. Students must be trained how to use and access eLearning sites.

Research should be conducted regarding the possibility of access to computers and internet being made available to students everywhere in South Africa, both in the city and rural areas. The aim of this research would be to determine if it would be possible to open free internet centres for registered students only in all municipalities in South Africa so that all students from will be able to have access to computers and the internet. This will minimise the inequality problems facing the HEIs.

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# ACADEMIC DISHONESTY: THE QUESTION OF ETHICS AND VALUES IN NIGERIA TEACHER EDUCATION PROGRAMME

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**Abstract**
This paper examined the problems of academic dishonesty in Nigeria teacher training educational programmes. It was observed that this problem is so pervasive, intractable and largely responsible for the decline in academic standards. Academic dishonesty is found to negatively affect the educational, socio-economic and political life of citizens as well as an affront on the nation's security. Academic dishonest behaviours like examination malpractice in the form of fabrication of scores/grades, extortion, collusion, plagiarism, cultism, corrupt admission processes, etc. are so prevalent and at alarming rate. What ought not to be practiced overrides what is practiced. The vicious circle has sabotaged the dream and aspiration of producing competent teachers for smooth sail of the nation's education. This paper observed that these maladaptive behaviours are largely due to the neglect of ethics and institutional values. The paper strongly recommends emphasis on ethics and values in teacher education training programme so as to produce disciplined individuals who can defend their certificates and possess the right type of attitude for overall growth and survival of Nigeria and the global society.

**Keywords:** Academic dishonesty, ethics, values, teacher education, plagiarism, competent teacher

## INTRODUCTION

Education is the transmission from one generation to another the accumulated wisdom, knowledge, skills, values and attitudes of the society. Education influences individual values and attitudes. It is the means whereby the learner learns his humanness (Okorosaye-Orubite, 2008). According to Audu (2004) education makes man moral and ethical. It inducts the individuals into the shared values of society, and develops commitment to societal goals in the individuals. It prepares the young members of society for the future. Education also defines behavioral patterns of individuals and society. It enhances the productive capability of individuals and by extension the society.

Education is supposed to be the backbone for national transformation in Nigeria, but unfortunately effort since independence to use education as a spring board has failed to lead the country into the promised land. Among the factors that have hindered and frustrated the attainment of these goals through education are the unethical/dishonest behaviours and misplacement of values in teacher education programme in our institutions of learning(Denga and Ekoja 2008). Moreover, factors such as poor funding, absence of quality teaching, dilapidated infrastructures, poor political-will, frequent strikes, and so on cannot produce critical minds.

With knowledge and skills, teachers can influence the lives of those in their charge, but often, it is not the knowledge or skills that most affects the students, rather, it is the very person of the teacher and the values he/she embodies that influence the students. The teachers

knowledge, skills and personal qualities can save as major causes for the death of spirit, the loss of inquiry and students questioning of self.

According to Nwadiami,(2012), the functions of tertiary institutions of learning are means to societal ends. Education create new and valid knowledge, and this knowledge is useful for creating a better world through its application and what results from the application. Teaching and services rendered to students correctly, also add values to the society; if it delivers useful result. Useful results are defined as those adding values to the students, the institutions and the society. If tertiary institutions teacher training programmes do not add value to the learners, society and all its stakeholders then it is worthless.

It could be argued that the level of performance in any school is proportionately related to the quality of its teachers while the quality of any school system is a function of the aggregate quality of teachers who operate it. Mullens(1999), supported the argument and remarked that the level of a teachers subjects matter competence is a prime predictor of student learning.

## CONCEPTUAL CLARIFICATIONS

### a. Academic dishonesty

The syndrome of academic dishonesty is observed in the Nigeria education system. It is one of the major challenges of the Nigerian education system. Academic dishonesty is stealing the ideas of others to gain unmerited advantage and taking short-cut instead of working honestly to earn a reward (Olosehinde-williams, 2006). In the various levels of our educational system this behaviour seems very pronounced, cutting across race and educational levels bringing ethics of teaching profession and institutional core values to question. Examination malpractice, “sorting”, fabrication of scores, copying, impersonation are very common among students, while selling of examination grades, plagiarism etc are also common among the teachers. Olasehinde-williams(2006), noted that academic dishonest behaviour is increasingly alarming and that most students view cheating lightly. For Olesehinde-Williams academic dishonesty constitute a violation of academic integrity ideals and is symptomatic of weak moral standing. However, academic integrity is a personal choice to act responsibly and to take responsibility for one’s actions (Jones, 2011)..

Researchers have proposed a variety of methods for dealing with this immoral act. Among such measures are provision of alternate seating arrangements and identity checks during examinations in order to reduce cases of examination malpractice. Educational institution have also devised extra-judicial means of punishing offenders such as expulsion, rustication despite such regulations to prevent it academic dishonesty remain prevalent on campuses in Nigerian tertiary education institutions.

### Some academic dishonest behaviour

**1. Examination malpractices:** it is any act by students, invigilators, examiners, lecturers etc that contravene the ethics of examination and results in a death of credibility of any assessment, (Denga and Ekoja, 2008). The Federal Ministry of Education (2007), defined examination malpractice as” any act of omission or commission, which compromises the reliability and integrity of any assessment or evaluation system. The phenomenon has been perpetrated in the Nigerian educational system to the most ridiculous and bizarre levels from the primary to tertiary institutions level. Examination malpractice has assumed a new dimension in consonance with new trends in the information technology of the 21st century.

In this era dubbed "the jet age" the clicking of a mouse unveils a goldmine of information in the internet. In a similar vein, students are in a rush to acquire excellent credentials if possible within a couple of minutes, with less stress, on a platter of gold. This spate of examination malpractices calls for urgent redress of the systematic ethics and values. As an innovation to combat this menace, today in Nigeria, Bangkok University in Nigeria makes students wear anti-cheating helmet during examination.

**2. Impersonation:** impersonation according to Olorunmota, (2014) involves a false declaration to be another person. Students do this in order to write examination for another student not endowed intellectually. This act is pervasively perfected today to the extent that impersonators sometime clone receipts and image on identity cards to impersonate. This is of course immoral and unethical behaviour.

**3. Fraud:** Fraud can be committed when teachers for example receive salaries without delay and yet, will not do their work, the way they should do it. It can also take place when students would not "read for examinations, but they engage in acts of cheating", even surfing internet (Iroko, 2012). These are those who do not like teaching but found their ways into schools because of "the situation in the country". This category of people seems to be usually involved in fraud sometimes because of their incompetence or personal inadequacies.

**Sabotage:** Sabotage is a situation in which a student or the lecturers prevent students from completing their academic work (examination or project/research work). Sabotage can be defined as a situation in which official documents and books kept for general use are removed and used by other interested person. Changing the position of a useful textbook on a shelf in a library amount to sabotage. It can be a complete state of carelessness, where the person involved in the act of disenabling others to gain from what may be useful to others, does not consider the "harm" being done.

**Fabrication:** This is when date or information that are being taken to be real or genuine are invented without permission from sources other than one's own, and false claims are made about the data. Falsified data, information, or invented quotations or a citation in any formal academic work explains the meaning of fabrication.

**Professional misconduct:** Improper grading, negligence towards cheating and other similar cheating acts, make up professional misconduct. Laziness like inefficiency and ineffectiveness on the part of the assessor can promote this kind of academic dishonest act like taking bribe, attempting to favour, seeking favour and receiving unjustified pay, converting offices, classrooms to sex theaters, etc.

**Plagiarism:** Plagiarism in the Webster dictionary is defined as the practice of taking someone else's work or ideas and passing them off as one's own. Wikipedia, also define Plagiarism as the wrongful appropriation and stealing and publication of another authors language, thoughts, ideas, or expressions and the representation of them as one's own original work. Davis(1993), also defines plagiarism as a situation whereby one submits work of another person and presents the work as one's own. According to Davis example of plagiarism is copying materials from a book or other sources without acknowledging that the work or ideas are others. In our tertiary institution we find students purchasing a term paper which one did not write and presenting it as ones work. Lecturers sometimes go online to

substitutes the name of other authors in textbooks or journal articles and submit as own's work. This situation does not help people or nation to progress. The introduction of plagiarism checker in the Nigerian tertiary institutions will play a good role of reducing if not eradicates the case of "copy-cat" in the system.

**b. The concept of teacher education**

Quality education at all levels is a fundamental right of the citizens. Without doubt, socio-economic, political, technological and cultural progress in the world of mankind are vested on functional education which the teacher education plays a major role. Teacher education therefore can be viewed as a formal process of making the teachers truly professional by acquiring the right pedagogy from a recognize body that is charged with the responsibilities of training effective and efficient teachers. (Tijani, Rahamat and Ibrahim, 2013). Bulus (2010), see teacher education programme in Nigeria as an attempt made to provide quality teachers for all sub-sectors in the education sector, which appears to be ill equipped. Opinmi (2007) conceptualizes teacher education as policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviours and skills they require to perform their task effectively in the classroom, schools and wider community. Fafunwa (1982), defined teacher education as a set of education activities and experiences designed to equip a prospective teacher with skills and knowledge which builds his personality as well as make him a competent teacher.

Granted that teacher education programmes in Nigeria have produced prospective teachers with competent skills and knowledge, positive attitude, and behaviours for effective functioning in schools and society, then how come dishonest behaviours of exploitative sale of hand-outs, hurriedly self-authored and edited texts, organizing students to contribute money with which to settle external supervisors, exchange grades for money or have amorous relationship with students, selling original question papers to students prior to examination and selling admissions exorbitantly to under-deserving candidates? With these kinds of negative practices and dishonesty in the Nigerian teacher education system, how do the society expect quality graduates? What will be the hope of the Nigerian child in the near future if the government still has a non-challant attitude towards bringing ethics and values back to schools.

**(c) Ethics**

Ethics according to Brooke and Keneth (2002), is a philosophical study of moral judgment, value judgment about what is virtuous, just or unjust,moral right or wrong, moral good or bad or evil, moral proper or improper. For Opeyemi (2013), ethics is a philosophical discipline which seeks to examine the rationale for human actions. A discipline which brings to light the rational and deliberate aspect of human behavior. Ethics defines what ought to be done, or how life ought to be lived. Its concerns include the nature of ultimate value, and standards by which a human action can be judged rights or wrong, good or bad.

Tom (2004), noted that wherever there is a community of people, there are norms and mores that guide their practices. Thus, ethics offers impartial and universal sound reasons for living. Based on the above, ethics is concerned with the development of sound attitudes, preparation for useful living within the society and inculcation of proper values for the survival of the individual and the society. So the ethical teachers should be just, honest, impartial and free from all prejudices and bias in all dealings.

Ethics are concerned with principles which guide human conduct in a social context like the school. They are normative because they try to create or even prescribe standards for human actions or behavior. They are therefore concerned with moral principles which help prescribe standards for human behavior in the society. Ethical values and education are mutually interdependent. Thus, better social behavior as a result of the acquisition of right and appropriate social values through the school process is expected from educated persons. The knowledge acquired from the educational institutions should make the recipients to live right and harmoniously with others around them.

**(d) Values**

Okoh (2003) states that values connote importance, something that is qualitatively cherished: something that provides satisfaction or sense of accomplishment. By implication it means that anything considered to be valuable or admirable. It is the worth or worthwhileness given to a thing, person or situation. Values are the guiding principles of life which are fundamental for the all-round development of individual. Values are held in high esteem in every society. Values are reflections of one's personal attitudes and judgments, decisions and choice, behaviours and relationships, dreams and vision. Values influences individuals' thought, feelings and actions. Values guide use to do the right thing. These views can be summed up as follows:

- Values are one's idea about what is most important to one's life. These are what one wants to live for. Values are the silent forces behind many actions and decisions.
- Values are beliefs, a mission or a philosophy that is meaningful. Whether one is consciously aware of them or not, every individual has a core set of personal values.
- Values can range from the common place such as the belief in hardwork, punctuality, to the more psychological, such as self reliance, concern for others etc.

Values are general beliefs about popular behavior and goals which include the dimension of good and evil and a state of moral imperative and necessity. Scheurich and Skrla (2003), refers to values as the most important mechanisms in society. Values are integral and inseparable elements of social cohesion. Values are transferred and protected from generation to generation. One of the fundamental role of schooling is that of transferring acceptable societal values. Values are protected in the society by transferring them from generation to generation, but are values such as respect, loyalty, trust, fairness, honesty, hardwork etc been protected and transferred in the schools today?

**Teacher education: perspective on ethics and values**

Any school system that uses immoral means to educate her students will have to contend with future corrupt leaders (Banda and Chibueze, 2014). Corruption in low and high places continue to be a cancer in government and private sector establishments. In fact, the Transparency International has ranked the country (Nigeria) as the 10$^{th}$ most corrupt country in the world (Gamji, 2012).

Nigeria as a nation requires radical change that cut across every aspect of the society, the social institutions and agencies of social order. The aims and objectives of education according NPE (2013) are; a free and democratic society, a just and egalitarian society, a

united, strong and self – reliant nation and a great and dynamic economy. Education is used to achieve these. Advocates of social transformation see education as remedy to the social ills or vices in the society. Dewey and Childs (1933) had argued in support of the above assertion as they maintained that schools should be structured to encourage students as future leaders to transform the nation for security. Nigeria is one of the global societies that have been seriously faced with various social vices such as fraudulent behaviour, quackery, nepotism, injustice, dishonesty, murder, robbery, Boko Haram, political thuggery, assassination, arson, and so on.

There is pervasive lack of moral integrity in business, commerce, and basic human relations such that both home and abroad, Nigerians are everywhere suspected of cheating, stealing and fraud of all kinds. Nigeria continues to suffer endemic corruption which is evident in high crime rate and other indices of systemic social disintegration. Nigeria is a country endowed with enormous and various kinds of rich mineral resources which when properly harnessed and equitably distributed would ensure national transformation. Omalseye (2006) lamented that inspite of the huge material resources which Nigeria is endowed with yet, it is estimated that about 70% Nigerian still live below poverty line.

Corruption has viciously attacked our core values. There is obvious lack of patriotism. Nigerians no longer put Nigeria first. A public officer first thinks of himself/herself and what he/she stands to gain, not what he/she should contribute for the cause of national unity and progress (Mbaji, 2013). Unpatriotic leaders continue to plunge the entire nation into bondage and political topsy-turvy.

Ethical crises in Nigeria are gargantuan and multidimensional in nature. Scholars have maintained that the survival of any nation or culture depends to a large extent on the quality of its teachers. Hence, there is a burning need for Nigerians as a nation to cast its glance in the ability of its teachers in order to plant the seeds of honesty, patriotism, discipline, orderliness, focus, sense of community etc.

Teacher education programme that negate ethics and values, encourages dishonest conduct will end up producing graduates who are completely irrelevant to the society. It is through the teacher that the needs and aspirations of any nation could be achieved. The transformation of any nation depends to a large extent on the ability and capacity of its teacher. In the analysis of Stoff and Schwartzbery (2000), the teacher is perceived as a prophet who lays the foundation for tomorrow. Teachers are one of the main pillars of a sound and progressive society. Apart from parents, they are the main source of knowledge and values for learners.

Teacher education according to Oyekan (2000) is the soul of every modern educational system, and a nation without good teacher education is a moribund state. The growth of such a nation will be stunted, if not distorted. It is through the teachers that the expected knowledge, attitudes, behavior and skills required by the society could be achieved. A country where a high number of her educators are morally unsound will have to contend with morally unsound minds. Education is not the mere transmission of skills and knowledge, but must lead to the development of understanding and reason. A country where her educators and education system are plagued by immoral educators, low level of academic engagement, examination malpractices, plagiarism, and extortions among others cannot produce critical

minds. Quest for material gains has led to the neglect of adequate character and value development training.

The ethics of responsibility is needed for ethical practices to be meaningful. Naboth and Nwafor (2014) argued that Nigeria educational system lack value system. For instance, the core value of honesty encapsulates rejection of fraud in all its ramifications. Broadly speaking values and ethics are synonymous. Ethics substantially speaking covers the idea of both moral and non-moral values. Values change from culture to culture, but almost all societies have many values in common. Values such as honesty, respect, responsibility, commitment etc; moral values such as honesty, respect, courage, confidence, cooperation etc; social values such as equality, human rights, fairness, civility, honesty, loyalty etc.

According to Venkartaiah and Sandliya (2009), values are constellation of likes, dislikes, viewpoints, inner inclination, rational and irrational judgments, prejudices and associated patterns that determines a person's view of the world. Values in this context imply the guidelines and beliefs that lecturers in teacher education use when confronted with a situation in which a choice must be made. But to what extent do lecturers in our tertiary institutions orient their thoughts and actions towards the core values of the school in particular and the society in general? According to Okon (2006), Nigeria's tertiary education system is beset with evidence of systematic maladies rather than salutary breakthroughs. Personal values orientation becomes very incumbent considering the bankruptcy in our educational system. Students who are intellectually engaged will have little time to engage in social vices. But do lectures own up to their responsibility of teaching?

Olairan (2013), observed that 80 percent of the rot in universities are attributed to the "academic merchants" called "lecturers" who have turned the citadels of learning to supermarkets where lectures are auctioned through handouts. He further queried that effective learning cannot be achieved when the system is so perfidious to the extent that students obtain choice marks without attending lecturers or sitting for examination. Lecturers in tertiary institutions are expected to serve as torch bearers for the impartation of value education to youths; lecturers have the capacity to transform a diseased mind to a very young, fresh, innocent, healthy, natural and attentive mind. A transformed student mind is capable of higher sensitivity and perception. According to an Independent Corrupt Practices Commission (ICPC) report on corruption in tertiary institutions in Nigeria (2013), some university teachers in Nigeria have sunk into the shameful abyss of moral decadence, becoming sex bullies as a result of their unbridled lust for the female/male undergraduates they are paid to teach. The extent to which moral, social and ethical values have been eroded in our tertiary institutions is further exposed when Work Bank argued that universities in third World Countries, particularly Africa, were adding too little to economic prosperity and producing too many unemployable graduates with academic skills for which there was little demand. It also explains why our tertiary institutions are lacking behind in the global rankings of universities. The disastrous consequences of the ethical and moral rot inherent are very obvious.

The core values of Nigeria need to be strengthened for obvious development to be achieved. The core values identified by National Economic Empowerment and Development Strategy (NEEDS 2004) cited in Enu and Esu (2011) include respect for elders, honesty and accountability, cooperation, industry, discipline, self-confidence and moral courage should

not be compromised. Their excessive compromise has manifested in greed, corruption, dishonesty, violent crimes, political killings, drug peddling, and so many other anti-social and academic behaviours that have jeopardize all sincere efforts directed at stimulating national development. It is for good character and moral development which will lead to a healthy nation that ethics and values must be strengthened in view of this, stakeholders in education need to be familiar with the value basis of ethics in education and that immoral or dishonest behaviours could be prevented or avoided.

**Conclusion**

This paper has discussed the problem of academic dishonesty in Nigeria tertiary education and its negative impact on teacher education training programme. It also identified some academic dishonest behaviours prevalent in the school system. The paper also discussed perspectives of ethics and values as central to human lives since they guide human behaviours, give purpose and direction to our life. The issues of debasement of ethical values in tertiary institutions (Teacher Education Programme) are highlighted. The paper strongly suggested the strengthening of values education and ethical reorientation in teacher education programmes since teachers are the chief agents of societal transformation through the agency of the school. The position is anchored on the premise the education cannot be used to attain the much desired national development in an environment where there is little or no regard for common values like honesty, hardwork, punctuality, fairness and dedication to duty among others.

**Recommendations**

It is the recommendation of this paper that:

Value re-orientation for teachers/lecturers is necessary and this could be in the form of workshops, bulletins etc periodically.

Since the teacher is the number one in the whole of the process of development of education and the key person in the drive to progress, and the decay of education system can be traced to them, the government should ensure that teachers' welfare is not compromised.

Government and stakeholders should ensure that the issue of Teachers Registration Council of Nigeria is strictly adhered to, only trained and qualified teachers should be given the mandate to practice the teaching profession.

Teacher education in Nigeria should include dedication to building character, community, humanitarianism, and democracy in the youths. To help them think and act above and beyond the seductions and demands of the knowledge economy.

Core values should form the content of the curriculum for teacher education programme.

All academic dishonest or corrupt practices should be rejected and punished by law, regardless of the social status of the offender.

Database for all cases of misconduct committed in tertiary institutions should be stored and made public periodically for both staff and students.

Tertiary institutions must refine and clearly articulate their fundamental core values and identify criteria for checking academic staff and students whose value does not conform with the values of the school system.

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# A QUALITATIVE INQUIRY ON THE CHALLENGES FACING INTERNATIONAL STUDENTS AT INSTITUTIONS OF HIGHER LEARNING IN SOUTHERN GAUTENG, SOUTH AFRICA

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**Abstract**
Globally, more students than ever before are choosing to undertake an international education. The large-scale movement of students between education systems means that academics need to consider the learning and teaching implications of the increased numbers of international students in university and college classes. Remarkably, international students now form a large part of the diverse student community that exists at South African higher education institutions. As a result, South Africa has the highest number of international students in Africa. South African colleges and universities benefits in numerous ways from having international students. These students bring strong academic backgrounds, enhance cultural diversity of their respective campuses, make significant contributions to an institutions' revenue stream, teaching, and research, and help prepare the student body for diversity they will find in their respective workplaces. However, international students face numerous challenges that may affect their academic performance. The purpose of this study is to explore the challenges that international students face in the Southern Gauteng region of South Africa. Investigation of challenges faced by international students in South Africa is of great interest to potential international students, lecturers and higher education institutions. The study made use of a qualitative research paradigm using in-depth interviews and focus groups. The findings revealed that the challenges facing international students comprise of cultural difference, usage of local languages by academics in classrooms, fear of xenophobic attacks and lack of English proficiency. To overcome language barriers, the researcher suggest that lecturers should not simply dismiss these language challenges and expect international students to adjust. Rather, they should use methods in the classroom that will alleviate this problem. Lastly, limitations of the study and future research directions are presented.
**Keywords**: International students, English barriers, Cultural shock, Academic performance

## 1. INTRODUCTION

Globally, more students than ever before are choosing to undertake an international education. The large-scale movement of students between education systems means that academics need to consider the learning and teaching implications of the increased numbers of international students in university and college classes. Remarkably, international students now form a large part of the diverse student community that exists at South African higher education institutions. While there has been much research on international students worldwide, there is a scarcity of research on international students in developing countries such as South Africa.

In South Africa, the number of international students has grown dramatically since 1994, the year the country achieved democracy (Harris, 2002). According to Paige (1990), international students are individuals who are temporary residents of a country, other than their own, for educational purposes and they are culturally distinguishable from their hosts. The International Education Association of South Africa (IEASA) (2012) reported a record of 105

375 international students in this country. South Africa has the highest number of international students in Africa. Ayliff and Wang (2006) asserts that approximately two third of international students in South Africa come from other African countries. Ramphele (1999) indicates that international students prefer South Africa because of the reputation of its higher education system and affordable fees. According to Ren and Hagedorn (2012) colleges and universities benefits in numerous ways from having international students. These students bring strong academic backgrounds, enhance cultural diversity of their respective campuses, make significant contributions to an institutions' revenue stream, teaching, and research, and help prepare the student body for diversity they will find in their respective workplaces (Andrade, 2006). However, international students face numerous challenges that may affect their academic performance. Foremost among these challenges is their level of English language proficiency (accent, enunciation, slang, colloquial phrases, etc.) (Pedersen, 1991) and adapting themselves to different cultural expectations related to teaching, learning, classroom participation, and assessment (Ryan & Carroll, 2005). Furthermore, the learning context and teaching approaches may be radically different to what the students have previously experienced and mastered. As a results, international students tend to take longer to graduate than an average local students (Li, Chen & Duanmu, 2010).

### 1.1 **Rationale and Objectives of the Study**

The challenges presented by the international classroom gave the focus for this research. The research project therefore sought to investigate the perceptions of international students of their learning at the institutions of higher learning in Southern Gauteng, whether they were having any difficulties in making social and cultural adjustments to studying in South Africa and what process the institutions of higher learning could introduce to help these students to cope with their new environment.

## 2. THE CHALLENGES OF INTERNATIONAL STUDENTS

### 2.1 Language Barriers

Language barriers are viewed as difficulties students face when they have no language in common and try to communicate with each other (Harmer, 1996). The researchers further indicates that it is impossible for individuals to communicate when one or both parties do not understand each other's languages. In most cases, individuals studying outside their home countries tend to encounter language barriers (Zhou & Emanuel, 2007). Especially, when they come to a new country at an adult age (Mancici-Cross, Backman & Baldwin, 2009).

According to Mulligan and Kirkpatrick (2000) language barriers influence not only information gathering abilities but also help-seeking behaviours. In addition, language barriers have an impact on student ability to learn and may also lead to decreased confidence in students (Ramburuth & Tani, 2009). The lack of proficiency in English is seen as a major problem for international students in South Africa, since all the lectures are delivered in English. Halic, Greenberg and Paulus (2009) found that even students who felt they were proficient in the English language feel that delivery of the English language in the classroom creates challenges. For example, in the English language the tone was softer than their native language, leading to the perception that English lacks the affect and emotion of their native language, and accents creates challenges to fully comprehend what is being discussed in the

classroom. Furthermore, this makes majority of international students to feel helpless and over stressed (Mestre, 2008). Moreover, International students who come from non- English-speaking countries may find their academic performance affected in several ways (Leki, 2007). For instance, international students who are aware that they are not good in speaking and in writing, or who perceive that their English vocabulary is less extensive than their classmates, may be hesitant to speak out in class discussion (Heikinhemo & Shute, 1986). It may also be difficult for other students to understand what they say, and their remarks may be ignored or even interrupted (Mallinckrodt & Leong, 1992). As a result, international students may be reluctant to participate and interact in a classroom settings (Chen, 1996) and may even fail to "successfully complete their work in English-speaking learning environments" (Li *et al*., 2010).

### 2.2 Cultural Shock

Cultural shock is an additional challenge for international students (Black, Mendenhall & Oddou, 1991). According to Furnham (2004), culture shock is the term used to describe the emotions one gets when moving into an unfamiliar culture – inclusive of the shocks of being in a new environment, meeting new people, using a foreign language, separation from family & friends. Cultural shock is quite common amongst international students (Gong, 2003). International students come from every part of the world with different religions, cultures and backgrounds (Kagan & Cohen, 1990).

When individuals come to a foreign country to study, they are likely to find that they are expected to actively participate in classroom discussions, respond to questions posed by their lecturer during class meetings, take more responsibility for their own learning, and participate in group activities, such as presentations (Ladd & Ruby, 1999). These new expectations for academic performance and participation may lead some international students to experience "academic culture shock" resulting from differences in "the education system, lecture style, assessment, and relationship between students and lecturers" (Li *et al.*, 2010). Academic culture shock tend to have a negative effect on student performance (Ren & Hagedorn, 2012). Ladd and Ruby (1999) states that students from foreign countries may have been taught that it is disrespectful for a student to directly look at the lecturer when they are communicating, to question them or to even differ from their opinion. Understandings of audience expectations differ between cultures as well; students may have been taught that to state their opinions directly and forcibly in discussions or writing is arrogant as well as disrespectful (Robinson, 1992). Some international students have also been taught not to speak in class unless called upon (Ryan & Carroll, 2005). Depending on their foreign culture, international students might be good in memorizing information than criticizing arguments or asking questions (Swagler & Ellis, 2003). As a result, international students from such cultures may be more hesitant to speak up in class discussion than some other students. To an extreme extent, their writing may also rely heavily on passive constructions that obscure the direct presentation of their ideas (Hui, 2005). International students need time to adjust to the new culture and the amount of time they need depends on the degree of the similarity of the culture (Wester, Kuo & Vogel, 2006). For Example, students coming from the neighboring countries of South Africa such as Mozambique, Zimbabwe, Swaziland, LeSotho, and Botswana need less time to adjust as compared to students from distance countries.

### 2.3 Academic performance

Beyond adjusting to a new culture, international students also need to adjust to new expectations and challenges associated with their academic work. Even if the international students were academically successful in their country, they can easily lose confidence in their academic ability in the new environment (Kingston & Forland, 2008). Moreover, Nasir (2013) asserts that on entering a new country, the international students have to deal with several adjustment problems in a new social and academic environment. These problems may include difficulty in language and communication, accommodation and housing concerns, adjustment to different foods and tastes, changed climate, and difficulty in making social relations. The academic performance of international students may be affected by their inability to cope with these problems. It may be reasonable to assume that the students having better ability of adjustment can show better academic performance than those students who are less adaptable. Therefore, cultural adjustment plays an important role in successful completion of the study program of international students (Nasir, 2011). Cultural adjustment is defined as the changes that an individual undergo to form a relationship with the host society (Gabel, Dolen & Cerdin, 2005). According to Constantine, Okazaki and Utsey (2004), cultural adjustment involves the process of understanding and incorporating behaviors, values and beliefs of the host culture in the perspective of the one's own culture of origin.

## 3. METHODOLOGY

This paper employed a qualitative approach for the collection of data. According to Creswell (2002), qualitative research is an inquiry approach useful for exploring and understanding a central occurrence or phenomenon. In this study, a qualitative methodology was used to examine the challenges faced by international students in South Africa. In addition, the researchers investigated the views and opinions of international students directly through the use of in-depth interviews and focus groups. There were three (3) researchers conducting the interviews. The researchers interviewed thirty (30) international students. The researchers interviewed ten (10) international students from North West University, ten (10) from Vaal University of Technology, and ten (10) from Sedibeng TVET College. A snowball sampling method was employed to select the respondents. The respondents were selected for the purpose of providing inside information about the challenges they are facing as international students in South Africa. The respondents were made aware of the purpose of the study. They were also informed that they have a right to withdraw themselves or their responses. While conducting the interviews, the researcher recorded the interviews and took notes for future coding.

The researchers conducted a total of six (6) focus groups. Each focus group comprised of eight (8) international students. Two (2) focus groups were conducted at North West University, two (2) at Vaal University of Technology, and two (2) at Sedibeng TVET College. Moore, McKee and McLoughlin (2015) defines focus groups as a qualitative method of collecting data in the social sciences, which involves gathering individuals with mutual characteristics or interests to offer individual and collective insights into particular topics. According to Chinomona and Maziriri (2015), in a focus group, questions are asked in an interactive group setting, where participants are free to give views from any aspect and also talk to each other. A tape recorder was used to record the conversations.

### 3.1 Data Analysis

The analysis of data was conducted inductively in line with the process of thematic content analysis. After the verbatim transcription of the interviews, the researchers and two academics analysed all the transcripts of in-depth interviews by employing the process suggested by Strauss and Corbin (1998). These authors suggested the use of the following techniques in the data analysis and conceptualisation:

- **Open coding:** The first step taken by the researchers in the data analysis stage was to read through the notes made during the interviews and listening to the interviews recorded on tape to familiarise themselves with the data. This was necessary to capture all the fundamental aspects raised in the interviews and to establish the depth and credibility of data (Braun & Clarke, 2006). After scrutinising the data, the researchers grouped into categories and sub-categories any records that seemed to pertain to related ideas (Glesne, 2011)

- **Axial coding**: According to Chen, Chang, and Wu (2012), the practice of axial coding involves a second reading of interview records with the purpose of pinpointing relationships amongst themes and sub-themes. Firstly, the themes and sub-themes were revised to validate whether they were supported by interview transcripts. Secondly, the themes were re-analysed to check for relationships with sub-themes (Braun & Clarke, 2006). In cases where the themes and sub-themes were related, they were further collapsed to form one dominant theme (Chen *et al*., 2012).

- **Integration:** After conducting axial coding it was deemed necessary to make use of perceptual mapping to analyse the themes deriving from the data. The mapping method took the form of naming and defining precisely the themes identified in the analysis of the data. The aim of this step was to identify the essence of each theme and to determine the aspects of the data captured by each theme (Braun & Clarke, 2006). Iterative and recursive processes were used to ensure that all information relating to the study was appropriately captured (Creswell, 2009). The identified themes were then related to the research question and conclusions were drawn, based on the generated themes.

## 4. CREDIBILITY AND TRUSTWORTHINESS

To enhance the reliability and validity of this study, the researchers made use of situated methodology, reflexivity, prolonged engagement, member checks and inter-rater reliability. Situated methodology ensures that the reliability and validity is achieved by certifying compatibility between the research techniques and data analysis procedures (Kielhofner, 1982).

The reliability and validity of the present study was enhanced through situated methodology, reflexivity, prolonged engagement, member checks and inter-rater reliability. Using the concept of situated methodology (Kielhofner, 1982), reliability and validity were enhanced by ensuring compatibility between the research method and data analysis procedures. This was accomplished through making use of a purposive sampling technique that improved the

richness of collected data. Engaging the principle of reflexivity, the researchers were able to stay emotionally neutral throughout interviews and to approach the interviewing process with an open mind by bracketing all his inherent preconceptions about the subject under investigation (Fitzpatrick & Olson, 2015). The researchers also practiced "prolonged engagement" with interviewees. According to Kirk and Miller (1986), prolonged engagement is employed to produce a comprehensive data set and to enrich the "thickness" of data, with the main aim of enlightening the full picture of the phenomenon under study. As stated by Guba and Lincoln (1989), affirmation that member checks are "the single most critical technique for establishing credibility", contributors were offered a full record of the coded interviews, with a summary of the emerging categories, in order to determine whether the codes and categories appropriately explained their experiences. The analysed records were revealed to five respondents who were available at that moment and they all confidently stated that the interpretations represented a true reflection of their views.

In addition to participant validation, peer checking was conducted by two experts in qualitative research; this check took the form of an "audit of the decision trail", whereby all stages in the data collection and analysis were scrutinised in order to determine their adequacy (Kielhofner, 1982). The use of independent experts to assess recorded interview transcripts and interview notes was a form of re-test reliability (Morrissey, 1974) and corroborating themes (Crabtree & Miller, 1999). A table indicating the sub-categories, categories and themes was developed for inter-rater reliability, as suggested by Vagharseyyedin, Vanaki and Mohammadi (2011).

## 5. FINDINGS AND DISCUSSIONS

The findings reveal that cultural difference is a major challenge for international students in South Africa. The findings of this research paper are in consistence with literature. Ren and Hagedorn (2012) found that international students' relations to other cultures may have a negative impact on their academic performance. Students from some cultures may have been taught that it is a sign of disrespect to look directly at the lecturer when they are speaking, to question them directly, or to differ from their thoughts and feelings (Ladd & Ruby, 1999). Chan (1999) also found that tolerance and understanding of audience differ between cultures as well; students may have been taught that to state their opinions directly and forcibly in discussions or writing is arrogant as well as disrespectful. As a result international students are reluctant to participate in class discussions, they tend not to speak in class unless called upon (Ryan & Carroll, 2005). Biggs (1996) found that international students are more active in one-on-one interaction with lecturers. Depending on their school culture, international students may have mastered memorizing information than asking questions or sharing their point of view.

"*I find it very difficult for me to speak inside the class with many other students listening to me"*
(International student, Uganda)

*"I think the main reason we cannot actively engage in class discussions is that from primary school we were trained to only answer teacher's questions and never talk back to the teacher. In my country the teacher is always right!"* (International student, Zimbabwe)

Some international students also revealed that some South African lecturers explain complicated concepts using South African languages. These students feel unappreciated and excluded. The use of local languages in a higher education institutions deprive international students from understanding everything that is taught in the classroom. This finding is supported by Talebloo and Baki (2013), who stated that international students become irritated when the facilitator communicates in a local language in the lecture room.

> *"I am a marketing student, so my lecturer likes making examples using the advertisements that play on SABC1, SABC2, SABC3 and e-tv. Most of these advertisements are targeting local people and they use local languages so I become very lost whenever he makes such examples".* (International student, Nigeria)

> *"I feel like we are not a priority in this university. How can someone explain using his language while they know some of us are not from South Africa?"* (International students, Tanzania).

The study findings indicate that international students in South Africa live in fear as a result of previous Xenophobic attacks which claimed many foreigner's lives. This finding is in consistence with literature. Lippert and Mpanza (2008) points out that the xenophobic attacks started in 1994 and raged viciously in May of 2008, where mainly black African immigrants were targeted, regardless of whether they were legal or illegal immigrants. Harris (2001) found that many international students in South Africa fear that they will become victims of discrimination and prejudice. As a result of their fear of xenophobia, international students find it difficult to build friendships with local students and this also discouraged them from staying in the country after completing their studies (Harris, 2002).

> *"I truly love South Africa. However, our lives are not safe here. As a foreigner, I can be killed anytime"* (International students, Algeria)

> "*Xenophobia is unpredictable. We cannot be sure whether it will happen again or not. In this day and age, we still have classmates who call us with inappropriate names such as* ***kwerekwere****"* (International student, Cameroon)

The findings revealed that the main challenge that international students face in South Africa is English proficiency. The participants felt that they have serious problems understanding and communicating with classmates and lecturers. Majority of the participants were from other African countries. English is a primary problem for students from countries that use French and Portuguese as an official language. Countries such as Algeria, Burundi, Chad, Republic of Congo, Morocco, Rwanda, Togo, Benin, Cameroon, Comoros, Gabon, Senegal, Tunisia, Democratic Republic of the Congo, Central African republic etc use French as an official language. While countries such as Equatorial Guinea, Mozambique, Angola, Portugal, Guinea-Bissou, East Timor and Cape Verde use Portuguese as an official language. This finding is supported by literature. Pedersen (1991) scribes that it is common for international students to have problems in oral and written academic English language usage. This is also supported by another similar study which reported that international students faced the most difficulty in academic English oral presentations (Ward & Masgoret, 2004). International students find it more difficult to articulate their knowledge in essays or research

papers with their limited English vocabulary (Jonasson, 2004). As a result, international students are unwilling to communicate and interact with their fellow classmates and lecturers (Lin & Yi, 1997). Sometimes misunderstanding appear when international students use their limited English to communicate with their local classmates (Mestre, 2008). Hence, international students end up isolating themselves from others (Barker *et.al*, 1991).

> *"When I came to South Africa, I couldn't even speak or write in English. I wrote the Test of English as a Foreign Language (TOEF) to be admitted to this university but that was not enough for me to understand English. I failed most of my modules in my first year, not because I am stupid but because I did not understand what the teacher was explaining. Not understanding English makes it difficult to even make friends at school"*. (International student, Republic of Congo)

## 6. LIMITATIONS AND FUTURE RESEARCH

This study, like most studies, has some limitations, which present numerous future research opportunities. Majority of the participants were not fluent in English. This may have made it difficult for the participants to express themselves clearly. Preferably, the interviews would have been conducted in a language they fully understand. Even though the participants appeared relaxed and willing to share their experiences, they may have held back a bit, due to language difficulties and feelings of mistrust (since the researcher was South African). In light of this, a longitudinal study might be preferred, with a series of interviews, whereby a more trusting relationship could have developed, which would have allowed the participants to explore their feelings and experiences more deeply. The research was conducted in only one province. Further research into international students' experiences in other universities and provinces is encouraged. International students were treated as a homogenous group. Future research can focus on indicators that differentiate international students from others such as nationality, ethnicity and age. This study also did not consider academic staff's views about the problems facing international students. There is also the problem with the data collection method used in this study. This study made use of qualitative research method. It would have been more robust if the study included both qualitative and quantitative methods. Lastly, due to the small sample, the findings cannot be generalized to a larger population.

## 7. RECOMMENDATIONS

To overcome language barriers, the researcher suggest that lecturers should not simply dismiss these language challenges and expect international students to adjust. Rather, they should use methods in the classroom that will alleviate this problem. Research indicates that in order to allow students that are not proficient in English to better comprehend what is being discussed in the classroom; lecturers should slow their pace of delivery and avoid using slang and metaphors which may not be understood by international students. Most importantly, lecturers should avoid using local languages in the classroom as they make international students to feel unwelcome.

The classroom needs to be perceived as inviting and conducive to learning from the first time the student enters the classroom. For lecturers to start creating a non-threatening environment, they should use a significant portion of their first class session to permit

students to get to know each other and also allow for informal communications to take place between the students. From this, student will learn a lot about each other, learn how to correctly pronounce each other's names, and learn something unique about each other, which may assist in forming bonds and relationships outside of the classroom. These peer interactions have been revealed to be helpful to international students as a support mechanism while they also provide local students the opportunity to develop intercultural awareness. It is also essential for lecturers to mix international and local students when forming groups for group projects. As such, group activities in the internationalized classroom are very important for cultural understanding and appreciation. Group work encourage more dialogue to take place between local and international students. It is also important for lecturers to have consultation hours, in order to cater for students who prefer one-on-one interaction.

## 8. CONCLUSIONS

South Africa has become a home to many international students. Especially, international students from other African countries. These students benefits the country in numerous ways. However, they face more challenges compared to local students. It is important for the higher education institutions to find ways to overcome those challenges. English proficiency is the main problem faced by international students in South Africa. Language can cause many problems for international students studying in South Africa. Students might interpret some messages in different ways which are far from the lecturer's perspectives. Moreover, a lecturer may deliver the curriculum content which students cannot fully take-in. As such, lecturers can make use of visual approaches as they have been proven to provide a holistic understanding that may be able to interpret English language in a simple and pictorial way. The visual approaches can improve students' English ability in listening, speaking, reading and writing. The results generated from this study reveals the importance of offering services for international students in terms of continuing social connections. Particularly, international students who felt socially connected and who were satisfied with their social networks were less likely to experience acculturative distress. A critical implication of this finding is that counsellors should develop programmes that build community and connections for international students.

One of the major challenge facing international students in South Africa is the fear of xenophobic attacks. There is a great need for the government to intervene and eradicate xenophobia in South Africa.

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# STRATEGIES FOR IMPROVING HEAD OF DEPARTMENTS SUPPORT TO MATHEMATICS AND SCIENCE TEACHERS IN CAPE TOWN, SOUTH AFRICA

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## Abstract
The study examined the strategies that can be used to improve Heads of Departments support to Mathematics and Science teachers. While support for all Heads of Department is important in all learning areas, the need becomes more pronounced in subjects such as Mathematics and Science as these subjects are generally considered to be more challenging than the others. Mathematics and Science literacy are central to all further learning, yet the poor performance of South African primary school learners in Mathematics and Science is appalling. As an effort to increase success rates in Mathematics and Science there is need to devise strategies to supporting Mathematics and Science Head of Departments who are instructional leaders in the two subject areas in the basic schools. A qualitative method and case study design was used for an in-depth understanding of the phenomenon. The instruments used to gather and analyse data were Face-to-face, semi-structured individual interviews, observation and document study. The findings suggest that strategies for improving Heads of Departments support to Mathematics and Science teachers should include selection of teachers with good content and pedagogical knowledge of the two subject areas for the post, engage Head of Departments in professional development programmes, share goals and provision of basic and relevant resources. Recommendation based on the study was that Mathematics and Science HoDs should be supported adequately with subject content knowledge and formal leadership and management programmes. This is to ensure their efficacies to support teachers teaching the two subjects.

**Keywords:** strategy, support, professional developmental programmes, shared goals

## Introduction
Improvement is a stage-wise process which requires technical, social and emotional skills and a well-developed explicit set of practices that need to be well distributed in the organisation (Robert, 2007). Martins (2007) asserts that the instructional and improvement support of HoDs to Mathematics and Science teachers is crucial for various reasons: first, there is a growing importance attached to the roles they play in schools; second, to manage the uncertainties that tend to arise about the roles of HoDs; and third, to effectively manage the problems associated with their performance. According to Ngmenkpieo (2010), owing to the critical role HoDs play in supporting teachers, all efforts should be directed to supporting and improving HoDs' leadership skills and instructional support to Mathematics and Science teachers.

In the case of improving leadership performance, Martins (2007) observes that the extent to which leaders such as HoDs receive appropriate training and the overall development opportunities made available is important. This is because school leadership is literally based on the quality of management training, personal commitment, profound knowledge of the subject matter and the local terrain and good judgment (Onguko, Abdalla & Webber, 2008). This, the authors say, calls for quality management training programmes to optimise positive

impact on teaching and learning. In the USA for example, most school leaders are trained in formal preparation programmes housed at four-year colleges and universities (Nelson, de la Colina & Boone, 2008).

Blasé and Blasé (1999) and Onguko, Abdalla and Webber (2008) also note that England, Europe, Australia, North America, Asia, Netherlands and the Scandinavian countries have a multitude of professional development programmes (usually in-service training) offered to HoDs to improve their managerial and leadership skills, attitudes and knowledge. The content offered in the preparation of such programmes includes topics such as leadership and management, change, motivation, communication, team building, financial management, and staff appraisal, among others (Onguko, Abdalla & Webber, 2008). Blasé and Blasé (1999) reiterate that improvement of leadership programmes should teach practising and aspiring HoDs how to develop professional dialogue, collegiality among teachers, group development, theories of teaching and learning and reflective practice. This has become necessary because school leadership nowadays is a profession requiring special preparation for the job (Karstanje & Webber 2008). Improvement strategy for HoDs support to teachers requires focus on content, knowledge and instructional practice coupled with the allocation of resources.

Teacher development and capacity building of the schooling system in Cape Town, South Africa needs consolidated plans that address content gaps and teaching methodologies at provincial/ district/ school levels. The table below contains some of the Mathematics and Science instructional support strategies:

Table 1.1 Mathematics. Science and Technology Instructional Support Strategy, the role of the Cape Teaching Leadership Institute (CTLI) as the official training arm of the Western Cape Education Department (WCED).

| **Project** | **Aim** |
|---|---|
| Center of Science and Technology | To encourage leaners in disadvantaged areas to perform well in mathematics and science<br>To offer special tuition to mathematics and science leaners |
| Mathematics and Science Academy | Set up to identify and recruit leaners with high potential<br>To recruit competent teachers |
| Cape Town Institute | To offer six weeks full time course for mathematics and science teachers at the Intermediate Phase level |
| The Multi-grade Rural school intervention | To train teachers in multigrade classroom management<br>To train teachers to use ICT in teaching |
| The Thintana MST Project | To offer courses to teachers in mathematics and science<br>To train assessors in mathematics and science and technology in education |
| Advanced Certificate of Education | To offer courses to teachers in mathematics and science<br>To train assessors in mathematics and science and technology in education |
| The Khanya Project | To offer training to teachers in mathematics and science<br>To offer resource materials<br>To offer computer-based training in mathematics and science |
| The E-Curriculum | To provide leaners with ICT to be used in tertiary institutions |

| | |
|---|---|
| Project | To support mathematics and science learners in high Grade 10 and 12<br>To provide computers and related technology to schools |

Table 1.1 shows the enormous move by the Cape Town Department of Education and WCED officials to improve mathematics and science instruction. What is, however, lacking, is effective instructional leadership in the schools to support these two learning areas (Bernstein, 2005). In the 21st century, schools require effective instructional leaders and managers such as HoDs, if they are to provide the best education for their learners (Bush, 2007). Colitz, Fuglestad and Lillejord (2002) argue that the failure rate in mathematics and science is unacceptably high and requires efficient instructional leadership in the field especially in the primary school.

**Statement of the problem**

Research done by Murphy, Brown, Herman and Ozturgut (2006, p. 102), show that "HoDs are not formally trained on leadership skills about teacher supervision and support". The minimum basic qualifications for HoDs in South Africa include a matriculation certificate, a three-year diploma (the required Relative Educational Qualification Value, REQV 13) and two years minimum teaching experience (Employment of Education Act 76 of 1998). Other requirements involve medical fitness, sound character (not guilty of any misconduct during two years preceding the application) and language proficiency (DoE, 1996). The minimum qualifications required for promotion to HoD as discussed, coupled with the selection criteria used for these candidates, suggest that HoDs might not possess the key leadership skills necessary for supporting Mathematics and Science teachers.

In this study, it is argued that by virtue of the perceived complexity of the learning areas of mathematics and science, leaders (HoDs) with expertise and a wide repertoire of knowledge in the subject content, rather than mere teaching experience, are required (Ngmenkpieo, 2016). Ngmenkpieo's argument is that without the essential expertise, knowledge and skills, it would be difficult for HODs to understand the challenges in teaching mathematics and science so as to be able to give the necessary instructional support to teachers of these two learning areas effectively. Also, because HoDs have direct influence on the quality of learning and teaching, the position requires leadership in relation to curriculum initiatives, the learning and teaching process and co-ordination of a range of classes in the overseeing of Mathematics curriculum.

The recurring poor performance in these two subjects calls for a concerted effort on measures that will help improve the *status quo* (Makgato and Mjii, 2006). One important element in my endeavour to find solutions to the problems of poor performance by learners is to undertake investigations in basic schools so as to inform stakeholders.

**Theoretical Framework**

This study is anchored on the situational leadership theory approach which assumes that there is no one best way of leadership that transcends across all situations (Liu & Liu, 2006). The situational theory holds that what works for a leader in one situation may not necessarily work in another (Bradly, 2006). Hence, holders of the situational theory believe that a leader's most appropriate action or behaviour depends on both the situation and on the followers. In other words, HoDs may need to concern themselves less with the actual

behaviours they exhibit and give more attention to the situation within which they work, and create the right environment, one in which the teachers want to be involved and feel committed to their work. The work of HoDs, as leaders, influence and direct the activities of the teachers towards the achievement of desired goals.

Situational leadership theorists believe that leadership is not just about traits, behaviours, processes and activities of the person who is in a leadership position, but also encompasses the environment/situation and how the leader responds, as well as the particular skills and activities of the people being led (Horner, 1997). Situational leadership theory was used for this study basically because the model has become very popular in educational circles. According to Krüger and Scheerens (2012) situational leadership activities are effective for schools as it: promotes an orderly and stimulating work climate, emphasizes on basic skills, co-operates with teachers on curricular and instructional issues, Encourages and rewards teachers, supervises and motivates teachers and advances the skills, expertise and professionalism of teachers (Sevkusic 2014). Furthermore, situational leadership theory was adopted for this study on the basis that it is a means by which educational leaders at all level can use to increase their probability of success in working with and through others to accomplish goals.

The purpose of the paper is to find out the strategies that can be used to improving Heads of Departments Support to Mathematics and Science teachers in Cape Town, South Africa.

**Methods**

In this study, a qualitative and a case study design approach was used. This approach was used with the aim to capture in-depth perspectives of the participants, the context in which HoDs support strategies to the teaching and learning of mathematics and Science can be improved. A qualitative research approach was also used for the purpose of understanding deeply and in detail the phenomenon of improving instructional support strategies HoDs provide to mathematics and science teachers (Holliday, 2007).

**Sampling**

Based on initial site visits and preliminary discussion with participants, in deciding which schools to select, which and how many participants to interview, Those schools that were interested in the research and allowed accessibility were chosen. This was in tune with Holliday (2007, p. 10) who believes the researcher must "consider the interest and accessibility to the research site and the participants".

The sample of the actual participants was purposeful in the sense that it included HoDs, Mathematics and Science teachers who were selected on the basis that they possessed the relevant information related to the research which could help provide an answer to the research question (Holiday, 2007). Purposeful sampling was used for the identification and selection of information-rich cases related to the phenomenon of interest (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2013). In other words, the sample comprised four HoDs and four Mathematics and Science teachers, from four selected schools.

**Demographics of the sample**

All HoDs interviewed and observed for this study were females. This could be attributed to the dominance of female teachers at the Intermediate Phase level in schools. In contrast, all the four schools involved in the study, except for one, were headed by male teachers, which

could explain the gender disparity in higher positions in schools. Equally significant was that with the exception of one HoD, who had a Bachelor of Education honours degree in management and was even acting as HoD, all the other HoDs were appointed on a full-time basis due to their long service experience in the teaching profession. The most highly experienced HoD had 34 years of teaching experience and the least experienced had seven years of teaching experience.

**Data collection**

In order to obtain relevant information for the study, face-to-face, semi-structured interviews were used with HoDs and teachers, as well as document analysis. Semi-structured, interviews were considered more flexible than structured interviews as they helped the researcher to expand on the participants' responses and to probe in-depth into the research problem (De Vos, Strydom, Fauche & Delport, 2002).

Permission was sort from the participants, before the interviews were tape recorded to enable the researcher to get direct responses from the participants (Flick, 2007). The tape recorded interviews made it possible to get detail and the most accurate record than the amount of note taking or reflection could offer.

Documents are available materials or data which are in existence prior to the research at hand (Merriam, 2001, p. 113). Document analysis involves "the collection of facts from written texts that are available within an organisation, such as existing files, reports or records" (Hitchcock & Hughes, 1995, p. 212). Richard and Morse (2007, p. 117) state that "institutional records such as school management records, policy statements or home records are all secondary data".

Document analysis was used as a secondary data-generating instrument for this study. One reason for using document analysis was that this technique reveals hidden secrets which are difficult to uncover through the account of people in the research setting (Holliday, 2007). They can also reveal deeper and more tacit aspects of the nature of the instructional support HoDs provide to the teachers. The documents which were relevant to this study included the educators' handbooks. The documents revealed additional information regarding criteria for appointing HoDs and the role of HoDs in school departments.

**Data analysis**

The data-analysis approach adopted in this study was content analysis. This was a close inspection of text(s) to understand themes or perspectives of the individual participants (Brantlinger *et al*., 2005). This approach was guided by the research question: what strategies can be used to improve the instructional support HoDs provide to Mathematics and Science teachers in Cape Town primary schools?

The analysis procedure was in two folds: First, transcription of the interview recordings read through thoroughly and highlighted the themes (Cohen & Manion, 1994). Identification and colour-coding of recurring themes within the data from each of the participants. This was to determine the emerging themes from the data. The second stage involved identifying common themes and areas of variations among the participants and those themes that emerged (Wiersma & Jurs, 2005). The themes were later used to structure the presentation of the discussion in relation to the literature.

### Ethical concerns

Before visiting the schools to conduct the research, permission was sought from the WCED for access to the various schools to conduct the research interviews (Maree, 2007, p. 298). A consent letter was written to the WCED director who was responsible for the schools in the Western Cape Province (Cape Town in particular) for permission to conduct the research in the schools, which was granted. The participants were given informed consent forms to sign in order to show that their consents were sought and that their participation in the study was voluntary. They were free to withdraw from the study if they wished to (Maree, 2007). Responses to questions were kept confidential and anonymous (Maree, 2007).

### Trustworthiness

To ensure trustworthiness, member checking of the interview findings was done to confirm the accuracy or inaccuracy of interview transcriptions and the field notes (Brantlinger *et al*., 2005, p. 1).

## Findings and Discussions

### Select teachers with good content and pedagogical knowledge to be HoDs

The findings revealed that Heads of Departments are appointed into instructional leadership position based on their subject expertise but rather their long experience in the teaching service. The nature of the position is such that the Head of Department should have the grasp of both content and the pedagogical knowledge in Mathematics and Science. However as it stands, the minimum basic qualifications for HoDs include a matriculation certificate, a three-year diploma (the required Relative Educational Qualification Value, REQV 13) and two years minimum teaching experience (Employment of Education Act 76 of 1998). Other requirements involve medical fitness, sound character (not guilty of any misconduct during two years preceding the application) and language proficiency (DoE, 1996).

One way to improve Head of Departments Support to Mathematics and Science teachers is to raise the entry point to HoD status to at least a bachelor's degree (Ngmenkpieo, 2016). The assumption is that the higher the education qualification the teacher obtains, the more knowledgeable s/he would be in subject area. This is in keeping with Graeff (1983) hypothesise that the capacity of an individual to perform well at a job results from the amount of education and/or experience that the individual has acquired. Basically, the strategies for improving HoDs is also about improving the quality of the teaching workforce. For those teachers who already hold the HoD position without the proper academic qualification, further programmes should be in place for them to undergo staff development. Such programmes might enable them to hone their supportive skills and to mobilise limited scarce resources to Mathematics and Science teachers.

### Offering Professional Training to HoDs

It was revealed in the findings that workshops and in-service training were ideal ways of improving the support that HoDs provided to Mathematics and Science teachers. The fact that HoDs in the primary schools are in charge of many subject areas, which they may not necessarily have the capability to supervise effectively, it is enough for them to suggest regular workshops and in-service training. It is even more necessary when the HoDs are not appointed based on their subject expertise but rather their long experience in the teaching

service. Leithwood (2005, p. 622) states that the "factors stimulating successful leadership practices include on-the-job learning, professional development experiences, socialization processes and individual traits" which are developed during workshops and in-service training sessions. Some HoDs mathematics and science in our schools are either underqualified or unqualified, there should be evaluated in terms of IQMS to ensure a thorough skills audit to reveal the training needs of the affected HoDs.
One participant described IQMS as:

> …a gauge for teachers to see how they are faring in their teaching, in the lesson preparation, in the control of the classroom, and also the way they teach the lesson. How they interact with children, parents, human relation...

Giving professional training to HoDs in IQMS will ensure that there are competent and qualified to support Mathematics and Science teachers effectively. It is worth pointing out that training sessions, mentoring and professional development are crucial for HoDs mandate (McAdamis, 2001).

**Making Resources Availability to HoDs**

As revealed in the study, instructional support is making sure that everything that is necessary for teaching to take place is in place. This is in keeping with Naidu *et al.* (2008, p. 163) who argue that resources are the means of supply and support that assist school managers such as HoDs in the achievement of goals. These resources include money, time, material resources and human skills. Karstanje and Webber (2008, p. 741) also observe that resources such as "finances, facilities, information and information systems, and buildings are well known as elements of management and leadership improvement". However, majority of schools in the country have a serious problem with regard to facilities such as laboratories and equipment to promote effective learning and teaching of mathematics and science (DoE, 2001). One of the participants shared the same view about the lack of laboratory and expressed her sentiment that:

> We don't have science room, science laboratory, we did have one, but we have to sacrifice it for a classroom. So, our science equipment will not be as handy as will be in the science laboratory.

This lack of a laboratory or space for learners to interact appropriately and adequately with the teaching and learning of the two subject is an issue that needs argent attention. The effective allocation of these resources to HoDs is critical for the support of Mathematics and Science teachers' instruction in schools. Based on the South African School Act (SASA, 2007), the DoE and the School Governing Body (SGB) should ensure that the necessary resources in terms of infrastructure, equipment and material are in place for the schools and their department as this will enable the HoDs to work effectively with their teachers. With the right expertise and the resources available, HoDs will still need the school-based support, as discussed in the next section. It was revealed that HoDs ascertain what resources teachers need to support their work, and then secure these resources from the higher organisational levels such as the school principal or from the DoE. Such resources can include computers, software, tools or even funds and training (Hjorth, 2005; Tierney *et et.*, 1999).

Pertaining to how the support of HoDs to Mathematics and Science teachers could be improved, the findings indicated that HoDs are challenged by time constraints. They therefore need more time to enable them to prepare adequately for both their administrative and professional duties. Time resources are very important, in view of the fact that HoDs need to prioritise their use of time. Better still, the Education Department and the school principal can organise time management workshops or in-service training for both the HoDs and the teachers. Time management is very important to all managers, especially HoDs who seem to have a lot of responsibilities. Lansang (2003, p. 3) states that "time is finite and no one can actually do anything about it". Lansang further argues that we can only set our priorities and plan our lives and time according to these priorities. If HoDs choose to set their priorities wisely and plan the use of their time they will achieve the goals and tasks more efficiently. Staying focused on your goals, putting them in priority, and achieving them while balancing work and family life can be a rewarding experience that can never be over emphasised

**Shared goals**

Martins (2007) shared a concern about how far broader organisations like school systems and structures serve to facilitate leadership improvement. If HoDs are to carry out their instructional responsibilities effectively, attention needs to be paid by the school to a number of inevitable inter-related factors. The structural conditions that enhance school-based support to HoDs include: time to meet and talk, the use of space, resources, communication mechanisms, coordinating and planning professional development. Mercer (2009) further notes that across organisations like schools, people want to participate in shared decision-making and prefer to be intensely involved in any form of support. A shared sense of purpose, accommodation and celebration of diverse ideas, and meaningful participation in decisions will enhance the course of HoDs instructional support to teachers.

Furthermore, the school leadership needs to make sure that the HoDs can and do meet on a regular basis to discuss common problems and approaches to managing their departments (Clarke, 2007). Clarke also asserts that the school principals need to encourage and motivate the HoDs to form informal working groups with other subject heads of neighbouring schools to share expertise and problems associated with their roles as HoDs. The HoDs used mentoring and coaching and workshop to guide teachers' continuous professional development. The most effective leadership programmes focus on building professional knowledge, competence, skills and critical thinking (Allio, 2005). The best way to do this is HoDs professional development strategy with the intent to help them develop proficiencies that can help teachers master the standards, deepen teachers' knowledge of the subject(s) they are teaching and sharpen their teaching skills in the classroom (Allio, 2005)

**Conclusion**

Within the set of strategies for improving Head of Departments Support to Mathematics and Science teachers, we conclude that the selection of teachers with good content and pedagogical knowledge to be HoDs, offering professional training to them (HoDs), making resources availability to them and encouraging the share of good goals be considered. Since there are no single most powerful forms of strategy of supporting HoDs, they should be carefully chosen and given a proper training of alternative forms to mathematics and science teachers. Such strategies of improving HoDs must be research based and originate in the wisdom of practice. Strategies for improving HoDs' support to Mathematics and Science teachers, also includes an understanding of what makes the learning and teaching of

Mathematics and Science easy or challenging. HoDs therefore, need knowledge of strategies of situational leadership, fruitful in supporting teachers; the leadership style that combine different directive and supportive behavior. Thus, directing, coaching, supporting/participating and delegating powers, all in the name of making teachers do their work properly and successfully.

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# AVAILABILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY RESOURCES IN FEDERAL CAPITAL TERRITORY SENIOR SECONDARY SCHOOLS, ABUJA, NIGERIA

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## Abstract

The study examined the availability and utilization of information and communication technology resources in Federal Capital Territory (FCT) senior secondary schools, Abuja, Nigeria. The study adopted the descriptive survey research design. ICT model was presented in this study as a conceptual framework. The study used a sample of 94 respondents in both public and private senior secondary schools in FCT. Stratified sampling technique was used to select 94 principals in the sampled schools. The data for the study were gathered through an inventory and a questionnaire, which were administered to the principals in the selected senior secondary schools in FCT. To ascertain the validity of the instruments, content validity was adopted. The questionnaire was pilot-tested and reliability coefficient of 0.83 was obtained. Frequency counts, the mean score, standard deviation and percentage were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significant. This study revealed that despite the fact that ICT resources were available and in use in some FCT senior secondary schools, some of these resources were not available in some schools. Also, the study showed that the level of ICT resources utilization by the principals in FCT senior secondary schools was moderate. It was concluded that the availability and utilization of ICT resources, could enhance the management of senior secondary schools in FCT. It was therefore recommended that, the government should encourage the use of ICT in secondary schools most especially public secondary schools by providing ICT resources and ensure that computer/ICT education is made compulsory in order to enhance effective management.

**Keywords:** Information and Communication Technology (ICT), Availability, Utilization, Principals and Senior Secondary Schools.

## Introduction

The educational system in Nigeria is structured into different levels as: pre-primary, primary, secondary and tertiary levels (Federal Republic of Nigeria (FRN), 2004). Presently, education in any society requires information and communication technology (ICT) to facilitate large-scale learning needs for social and economic development. Mac-Ikemenpma (2005) opined that in a complex society like Nigeria, many factors affect its information and communication technologies use and integration, an interdisciplinary and integrated approach is very necessary to ensure the successful development of Nigeria's economy and society. In Nigeria, the increasing development of the educational system at all levels brings greater demands on curriculum planners, evaluators, administrators and teachers to move along with the ICT of the 21st century. The secondary level occupies a critical position in the educational system. Secondary education is the education children receive after primary education and before the tertiary stage.

The need for ICT in the Nigerian secondary schools cannot therefore, be overemphasized. Over the years, the administrative work of the principal has been paper-based, and various documents are kept in the form of records. A principal cannot perform his/her administrative duties without accurate, timely, sufficient and relevant information (Asiabaka, 2010). The challenges associated with storage, preservation and presentation of large volumes of information in paper form have made managerial processes in the schools very cumbersome. Thus, alternative methods provided by ICT have become imperative. In the same vein, principals need training not only in computer literacy but also in the utilization of various kind of computer based educational software in school management. The principals in Federal Capital Territory (FCT), Nigeria need to be well informed in the use of ICT resources for effective management of the schools. ICT utilization will prove beneficial in improving Nigeria's educational system and giving students a better education. Therefore, the study set out to investigate the availability and utilization of information and communication technology resources in Federal Capital Territory senior secondary schools, Abuja, Nigeria.

**Statement of the Problem**

There are developments in the Nigerian education sector which indicate some level of ICT utilization in the secondary schools. The Federal Government of Nigeria, in the National Policy on Education (FRN, 2004), recognizes the prominent role of ICTs in the modern world and the need to integrate ICT into education in Nigeria but ICT is yet to be integrated into education in Nigeria. Some of the challenges are the lack of/weak electricity supply, inadequate telecommunications infrastructure and limited internet access in substantial parts of the country. Therefore, the study investigated the availability and utilization of information and communication technology resources in Federal Capital Territory senior secondary schools, Abuja, Nigeria.

**Purpose of the Study**

Specifically, the study sought to achieve the following objectives:

5. Establish the availability of ICT resources in FCT senior secondary schools.
6. Establish the level of ICT utilization by the principals in the management of FCT senior secondary schools.
7. Determine if there is any difference between male and female principals' ICT utilization in FCT senior secondary schools.
8. Determine if there is any difference between experienced and inexperienced principals' ICT utilization in FCT senior secondary schools.
9. Ascertain whether there is any significant difference between principals' ICT utilization in public and private senior secondary schools in FCT.

**Research Questions**

In specific terms, attempt was made by this study to provide answers to the following research questions:

5. What ICT resources are available in FCT senior secondary schools?
6. What is the level of ICT utilization by the principals in the management of FCT senior secondary schools?

**Hypotheses**

The following null hypotheses were formulated to guide this study:

$Ho_1$: There is no significant difference between male and female principals' ICT utilization in FCT senior secondary schools.

$Ho_2$: There is no significant difference between experienced and inexperienced principals' ICT utilization in FCT senior secondary schools.

$Ho_3$: There is no significant difference between principals' ICT utilization in public and private senior secondary schools in FCT.

**Concept of Information and Communication Technology**

The term information and communications technology were introduced in the early 1990s to replace that of information technology (IT) in recognition of the communicating abilities and facilities offered by the computer (Adesote & Fatoki, 2013). The term ICT covers a whole range of applications, techniques and systems (Clarke, 2006). Lallana and Margaret (2003) opined that ICT "refers to a broad field encompassing computers, communications equipment and the services associated with them" (p. 7). United Nations Education, Scientific and Cultural Organization [UNESCO] (2002) defined ICT as the combination of informatics technology with others, related technologies, specifically communication technology. ICT includes all tools that we use to communicate or dissipate information such as the radio, television, telephones, mobile phones, overhead projectors, video cameras and players, computers and so on. ICTs are the means for providing an access to and engaging in the continuous learning that becomes necessary for successful participation in the society development of all social groups of the population (UNESCO, 2004).

**ICT utilization in Nigerian secondary schools**

There are developments in the Nigerian education sector which indicate some level of ICT utilization in the secondary schools. The Federal Republic of Nigeria, in the National Policy on Education recognizes the prominent role of ICTs in the modern world and the need to integrate ICT into education in Nigeria (FRN, 2004). To actualize this goal, the document states that computer education will be a vocational elective at the senior secondary school. It is also the intention of government to provide necessary infrastructure and training for the integration of ICTs in the secondary school system. The Federal Ministry of Education launched an ICT-driven project know as School Net (FGN, 2006), which was intended to equip all schools in Nigeria with computers and communications technologies. In June 2003, at the African Summit of the World Economic Forum held in Durban, South Africa, the New Partnership for African Development (NEPAD) launched the e-Schools Initiative, intended to equip all African high schools with ICT equipment including computers, radio and television sets, phones and fax machines, communication equipment, scanners, digital cameras, and copiers, among other things (Adomi, 2010). The aim of the initiative is to impart ICT skills to young Africans in primary and secondary schools, and to harness ICT to improve, enrich, and expand education in African countries (Aginam, 2006).

Achievement in the availability and utilization of ICT resources in Nigerian secondary school is dependent on the recognition of the importance of ICT application to education for sustainable development. However, Atsu (2014) noted that the use of ICT facilities for record-keeping assisted the school administrator to meet the task of school management in the areas of curriculum and instruction, school community relationship and school business operations. For example, the use of the computer which could store many files in its memory could make the daily tasks of the principals easier in the school management. With the diffusion of ICT innovations in educational institutions which has radically changed how

work is done, ICTs have offered tremendous possibilities in improving and developing principals' professional capability (Njoku, 2006).

**Obstacles to the ICT utilization in the Nigerian secondary schools**

Some of the impediments to the successful use of ICT in Nigerian secondary schools are: cost, weak infrastructure/electricity, lack of/inadequate skilled ICT manpower and limited access to the Internet.

**Conceptual Framework**

ICT model by UNESCO (2002) is presented in this study to provide a framework for ICT development in secondary school. This model conceives ICT development as a continuum along which an education system or an individual school can pinpoint the approach that relates to the growth of ICT for their particular context. This model is referred to as a continuum to approaches to ICT development. These approaches are emerging, applying, infusing, and transforming which are depicted as the model in Figure 1.

| | | | |
|---|---|---|---|
| Emerging | Applying | Infusing | Transforming |

**Figure 1**: Model depicting a continuum of approaches to ICT development in schools UNESCO (2002, p.15)

**The emerging approach**

Schools at the beginning stages of ICT development demonstrate the emerging approach. Such schools begin to purchase computing equipment and software. In this initial phase, administrators are starting to explore the possibilities and consequences of using ICT for school management and adding ICT to the curriculum.

**The applying approach**

Those schools in which a new understanding of the contribution of ICT to learning has developed exemplify the applying approach. In this secondary phase, administrators use ICT for tasks already carried out in school management and in the curriculum.

**The infusing approach**

At the next stage, the infusing approach involves integrating or embedding ICT across the curriculum, and is seen in those schools that now employ a range of computer-based technologies in laboratories, classrooms, and administrative offices.

**The transforming approach**

Schools that use ICT to rethink and renew school organization in creative ways are at the transforming approach. ICT becomes an integral though invisible part of daily personal productivity and professional practice. The focus of the curriculum is now learner-centred.

**Methods/Techniques**

The study adopted the descriptive survey research design. This method was used to elicit responses from a sample of principals in Federal Capital Territory senior secondary schools. The population of this study consisted of all the 187 senior secondary schools (public and private) in Federal Capital Territory. The sample of the study was made up of 94 senior

secondary schools in Federal Capital Territory. Stratified sampling technique was used to select the 94 senior secondary schools on the basis of 50% public and 50% private. A total number of 30 public senior secondary schools and 64 private senior secondary schools were selected. Thus, a total number of 94 principals were randomly selected from the Federal Capital Territory senior secondary schools as sample for the study that is 30 principals in public senior secondary schools and 64 principals in private senior secondary schools. Also, 54 male principals and 39 female principals were used.

**Instruments**

In this study, a questionnaire and an inventory were designed by the researcher to elicit information from the respondents. The questionnaire was tagged "Principal's Utilization of Information and Communication Technology Questionnaire" (PUICTQ), which was administered to principals. The PUICTQ comprised of two sections (A and B). Section A covered personal information of the respondents while section B was used to obtain information on the level of principals' ICT utilization. The respondents were required to answer the items on a 4 points Likert rating scale, ranging from 4 to 1 as follows: To very large extent is 4 points, moderately is 3 points, seldomly is 2 points and never is 1 point. The inventory for the availability of ICT resources was on 3 points scale of available/in use, available/not in use and not available. It was used to identify the available ICT resources and their utilization. PUICTQ was pilot-tested and reliability coefficient of 0.83 was obtained. Thus, 93 out of 94 (99%) of the instruments were returned and used for data analysis.

**Data Analyses techniques**

In this study, five statistical techniques were used for data analysis. The frequency counts and percentage were used to answer research question one while mean score and standard deviation (SD) were used to answer the research questions two. The t-test was used to test hypotheses. The decision rule the for interpretation of the results of the data analysis was that a mean score of 2.50 and above was considered as a positive response (moderately), and less than 2.50 was considered as a negative response (seldomly). The hypotheses were tested at 0.05 level of significant. The calculated probability (p-value) that was greater than the significant level of 0.05 was accepted while the p-value that was less than the significant level of 0.05 was rejected.

**Results**

**Research Question One**

Which of the ICT resources are available in FCT senior secondary schools?

**Table 1: Responses to the availability of ICT Resources in FCT Senior Secondary Schools**

| S/No | ICT Resources | Available/ in use Frequency | % | Available/ Not in use Frequency | % | Not Available Frequency | % |
|---|---|---|---|---|---|---|---|
| 1 | Desktop computer | 72 | 77.4 | 9 | 9.7 | 12 | 12.9 |
| 2 | Laptop computer | 59 | 63.4 | 7 | 7.5 | 27 | 29.1 |
| 3 | Computer Laboratory | 70 | 75.3 | 3 | 3.2 | 20 | 21.5 |
| 4 | Television set | 69 | 74.1 | 11 | 11.9 | 13 | 14.0 |
| 5 | Radio (Tape Recorder) | 33 | 35.5 | 17 | 18.3 | 43 | 46.2 |
| 6 | Electricity | 81 | 87.1 | 7 | 7.5 | 5 | 5.4 |
| 7 | Generating set | 73 | 78.4 | 11 | 11.9 | 9 | 9.7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | Mobile phone | 93 | 100 | 0 | 0 | 0 | 0 |
| 9 | Internet facilities | 60 | 64.5 | 0 | 0 | 33 | 35.5 |
| 10 | Video player | 45 | 48.8 | 12 | 12.9 | 36 | 38.7 |
| 11 | Intercom | 25 | 26.9 | 9 | 9.7 | 59 | 63.4 |
| 12 | Photocopy machine | 76 | 81.7 | 8 | 8.6 | 9 | 9.7 |
| 13 | Printer machine | 71 | 76.3 | 5 | 5.4 | 17 | 18.3 |
| 14 | Library | 84 | 90.3 | 3 | 3.2 | 6 | 6.5 |
| 15 | Electronic library or e-library | 18 | 19.3 | 5 | 5.4 | 70 | 75.3 |
| 16 | Overhead Projector | 36 | 38.6 | 9 | 9.7 | 48 | 51.6 |
| 17 | Electoral board | 32 | 34.4 | 0 | 0 | 61 | 65.6 |
| 18 | Board (white, black, notice and bulletin) | 93 | 100 | 0 | 0 | 0 | 0 |
| 19 | Scanning machine | 43 | 46.2 | 11 | 11.9 | 39 | 41.9 |
| 20 | Camera | 38 | 40.9 | 7 | 7.5 | 48 | 51.6 |
| 21 | Electronic books or e-books | 27 | 29.1 | 0 | 0 | 66 | 70.6 |
| 22 | Microphone/Public address system | 70 | 75.3 | 8 | 8.6 | 15 | 16.1 |

The result in table 1 shows that despite the fact that ICT resources were available and in use in FCT senior secondary schools, some of these resources were not available in some schools.

**Research Question Two**

What is the level of ICT utilization by the principals in the management of FCT senior secondary schools?

**Table 2: ICT Utilization by FCT Principals**

| S/No | Items<br>The Principal: | No | Mean | SD | Remarks |
|---|---|---|---|---|---|
| **1** | Uses a desktop computer for typing, processing and storage Information on the school, the students, the staff and so | 93 | 3.60 | 0.62 | To very large extent |
| **2** | uses laptop computers at home or outside the school to finish the unfinished office work. | 93 | 1.93 | 1.08 | Seldom |
| **3** | ensures that computer laboratory is used by the teachers and students for teaching and learning. | 93 | 3.00 | 1.17 | Moderately |
| **4** | ensures that television sets are used by the teachers and the students to watch educational programmes and current affairs | 93 | 2.52 | 1.20 | Moderately |
| **5** | ensures that radio/tape recorders are used by the students to learn relevant languages. | 93 | 2.57 | 0.91 | Moderately |
| **6** | uses mobile phones/ handsets to call and send text messages the staff and the parents. | 93 | 3.77 | 0.62 | To very large extent |
| **7** | uses internet facilities to receive and send an email to pare on<br>their children's information, staff, other principals, external examining bodies, the ministry of education officials and so on. | 93 | 3.02 | 0.98 | Moderately |
| **8** | encourages the use of video machine for educational programmes and purpose. | 93 | 2.48 | 1.23 | Seldom |
| **9** | uses generating set for the school when there is power supply shortage. | 93 | 3.47 | 0.62 | Moderately |

| | | | | | |
|---|---|---|---|---|---|
| **10** | uses intercom gadgets to communicate with the staff and the students in the school premise | 93 | 2.17 | 1.28 | Seldom |
| **11** | ensures that photocopy machine is used for reproduction of documents. | 93 | 3.49 | 0.86 | Moderately |
| **12** | uses printer machine for printing of documents. | 93 | 3.52 | 0.79 | To very large extent |
| **13** | encourages the use of the electronic library and books teachers to see new teaching methods and research | 93 | 1.87 | 1.05 | Seldom |
| **14** | encourages the use of overhead projectors for teaching and learning | 93 | 2.10 | 1.25 | Seldom |
| **15** | uses scanning machine to scan documents. | 93 | 2.42 | 1.90 | Seldom |
| **16** | ensures that camera is used to cover school events when necessary e.g. sports, seminars, workshops and so on. | 93 | 3.00 | 0.94 | Moderately |
| **17** | uses microphone/ public address system to communicate witl the staff and the students during meetings and assembli | 93 | 3.40 | 0.89 | Moderately |
| **18** | encourages the use of the electronic board (smart or star boar for teaching and learning. | 93 | 1.73 | 1.20 | Seldom |
| **19** | uses the board (white, black, notice and bulletin board) to pas information on meetings, examination timetables and so | 93 | 3.77 | 0.43 | To very large extent |
| **20** | encourages the students to use library for reading and studyin | 93 | 3.61 | 0.51 | To very large extent |
| | **Overall assessment** | | **2.87** | **0.93** | **Moderately** |

The result in table 2 shows that the overall mean score for the level of ICT utilization by the principal in the management of FCT senior secondary schools was 2.87, which is greater than the 2.50 cut-off point. This study showed that the level of ICT utilization by the principals in the management of FCT senior secondary schools was moderate.

**Hypothesis One**

$Ho_1$: There is no significant difference between male and female principals' ICT utilization in FCT senior secondary schools.

**Table 3: Analysis of Male and Female Principals' ICT Utilization in FCT Senior Secondary Schools**

| Group | N | Mean | SD | df | p-value | Decision |
|---|---|---|---|---|---|---|
| Male | 54 | 2.06 | 0.94 | 91 | 0.092 | $Ho_1$ Accepted |
| Female | 39 | 1.78 | 0.83 | | | |

**Note:** df is degree of freedom i.e. N-2

Table 3 shows the t-test analysis of male and female principals' ICT utilization. The p-value of 0.092 is greater than 0.05(5%) significance level, which means that there is no significant difference between male and female principals' ICT utilization in FCT senior secondary schools. Thus, the hypothesis was accepted.

**Hypothesis Two**

$Ho_2$: There is no significant difference between experienced and inexperienced principals' ICT utilization in FCT senior secondary schools.

**Table 4: Analysis of Experienced and Inexperienced Principals' ICT Utilization in FCT Senior Secondary Schools**

| Group | N | Mean | SD | df | p-value | Decision |
|---|---|---|---|---|---|---|
| Experienced | 72 | 2.57 | 0.84 | | $Ho_2$ | |
| | | | | 91 | 0.005 | Rejected |
| Inexperienced | 21 | 1.78 | 0.73 | | | |

**Note:** df is degree of freedom i.e. N-2

Table 4 shows the t-test analysis of experienced and inexperienced principals' ICT utilization. The p-value of 0.005 is less than 0.05(5%) significance level, which means that there is a significant difference between experienced and inexperienced principals' ICT utilization in FCT senior secondary schools. Thus, the hypothesis was rejected.

**Hypothesis Three**

$Ho_3$: There is no significant difference between principals' ICT utilization in public and private senior secondary schools in FCT.

**Table 5: Analysis of Principals' ICT Utilization in Public and Private Senior Secondary Schools in FCT**

| Group | N | Mean | SD | df | p-value | Decision |
|---|---|---|---|---|---|---|
| Public | 30 | 1.94 | 0.91 | | | $Ho_3$ |
| | | | | 91 | 0.052 | Accepted |
| Private | 63 | 2.52 | 0.92 | | | |

**Note:** df is degree of freedom i.e. N-2

Table 5 shows the t-test analysis of principals' ICT utilization in public and private senior secondary schools in FCT. The p-value of 0.052 is greater than 0.05(5%) significance level, which means that there is no significant difference between principals' ICT utilization in public and private senior secondary schools in FCT. Therefore, the hypothesis was accepted.

**Discussion of Findings**

The findings of the study revealed that ICT resources were available and in use in most FCT senior secondary schools, which implied that majority of the schools were provided with ICT resources. Some of these available ICT resources were not in use and some of them were not available in some schools. This finding is in agreement with the findings made by Adeyemi and Olaleye (2010), and Ogunshola (2009) that indicated that some of the ICT tools were available in most of their sampled schools. Their findings also revealed that most of the schools were provided with computers, printers, mobile phone, generating sets, and boards among others, which support the findings of this study. The result of the study showed that ICT resources were moderately utilized by the principals in the management of FCT senior secondary schools. On the other hand, the findings of this study contradict the findings of Adeyemi and Olaleye (2010) who reported that the usage of ICT equipment in the secondary schools was at a low level in Ekiti State.

The findings of the study revealed that both male and female principals utilized ICT resources in the school management when necessary but male principals (mean=2.06) used

ICT resources more than the female principals (mean=1.79). The study also revealed that the inexperienced principals(less than five year experience in the school management) used ICT resources more than the experienced principals (experience of five year and above in the school management) in the management of FCT senior secondary schools. The results of the study showed that the principals in the private senior secondary schools utilized ICT resources more than the principals in the public senior secondary schools. This is because most of the ICT resources were available in the private senior secondary schools than in the public senior secondary schools in FCT.

**Conclusion**

The principals, who by the nature of their unique position are leaders of their institutions, should actively initiate practical actions for relevant educational changes and innovations such as the integration and utilization of ICT into their administrative functions for better quality education. Achievement in the availability and utilization of ICT resources in Nigerian secondary school is dependent on the recognition of the importance of ICT application to education for sustainable development. The findings have led the researcher to conclude that the availability and utilization of ICT resources could lead to effective management of FCT senior secondary schools.

**Recommendations**

The principals need training not only in computer literacy but also in the utilization of various kinds of computer-based educational software in school management. The government should encourage the use of ICT in secondary schools most especially public secondary schools by providing ICT resources and ensure that computer/ICT education is made compulsory in order to enhance effective management. Also, efforts should be made by the principals to upgrade their knowledge of ICT utilization for their daily tasks for effective management. The government and the non-governmental organisation should encourage the use of ICT in secondary schools by organising training, seminar and workshop for the principals in order to improve their ICT utilization.

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# TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AND ENTREPRENEURSHIP EDUCATION PROGRAMME: A PANACEA TO SUSTAINABLE NATIONAL SECURITY IN NIGERIA

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## Abstract
This paper discusses the possibility of Technical and Vocational Education and Training (TVET) as a panacea to the persistence insecurity challenges in Nigeria. The population for the study comprises of 100 Technical educators and 100 entrepreneurs making the total population of 200 which was used as the sample size for the study. The study adopted descriptive survey and research instrument of questionnaire for data collection designed in a five point-Likert scale. The reliability coefficient of the instrument was ascertained at 0.98 values. The data collected was analysed using mean, standard deviation, and a Z-test for passing statistical inferences on the stated hypotheses. The findings shows that the application of TVET and entrepreneurship programmes as an instrument for socio-economic transformation can reduce insecurity challenges in Nigeria. This could be accomplished by creating necessary skills and knowledge for self-reliance, reducing unemployment through job creation, increase managerial skills for entrepreneurs and adaptation to international practices in processing and packaging of local products. Finally, recommendations are that, federal government should establish TVET, and Entrepreneurship centres in the six political zones, establishment of legal framework for TVET and entrepreneurship, qualitative educators should be provided for both TVET and entrepreneurship programmes.

**Key terms**: Entrepreneurship Education, Technical Education, Vocational Education, National Security Training

## Introduction
The combination of relevant skills and materials resources help in eliminating poverty which may lead to some socio-vices and it has been established that skills for someone to cope with challenges of life are best acquired in vocational and technical education. Technical and vocational education, according to the Federal Republic of Nigeria (FGN, 2004) is defined as a comprehensive term referring to those aspects of the educational process involve, in addition to general education, the study of technologies and related sciences, the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sector of the economic and social life. The aim of TVET is to prepare people for self-employment and giving them a sense of belonging. Hollander and Mar (2009), noted that TVET should be use as an instrument for reducing extreme poverty.

There is no doubt that TVET and Entrepreneurship are basic elements that can bring about sustainable peace to national insecurity challenges. This is because it creates skills, business and employment opportunities for the citizens. If TVET and Entrepreneurship education is integrated into the Nigerian educational system with a view of acquisition of practical and applied skills in business as well as basic scientific knowledge tending towards self-reliance, employment and wealth creation, then would insecurity challenge be drastically reduced. Festus (2011), observed that a country that has more trained entrepreneurs who have passed

through TVET programmes, stands a better chance of facing global competiveness in terms of business opportunities and employment generation rather than engaging in socio-economic vices that may lead to insecurity.

In Nigeria today, the increasing rate of unemployment, poverty and so many other social problems become worrisome to the government and to every citizen. Therefore, there is a need for a desirable change for attitude necessary for the country to forge ahead and meet up with the global world. Ewhrudjakpor (2008) reported that the incident of poverty in Nigeria is on the high side, where 70 percent of the total population has been classified as being poor.

However, as a panacea to the problem of unemployment, entrepreneurship skills to trades have been identified as a means of providing self-employment, income generation and solution to flourishing in an enterprise in the country. It is pertinent to note that TVETs and Entrepreneurship skills training can be a means to an end.

This paper is reviewed under the following: the concept of TVET; the concept of Entrepreneurship, the concept of security, statement of the problem, purpose of the study, research question, hypotheses, design of the study, population, sample and sampling technique, instrument for data collection, validation, reliability of the instrument, method of data analysis, conclusion and recommendations.

**The Concept of Technical and Vocational Education and Training (TVET)**

Odoi and Abdulkarim (2010) defined Technical and Vocational Education and Training (TVET) as that aspect of a programme designed to prepare individuals through formal training with skills for general survival, leadership, and work as a productive citizen to promote technology and sustain economic development of the individual and the society at large. They asserted that this type of education was intended to improve the nation's workforce through the training and graduation or skilled technicians in areas such as: Auto mechanic, Bricklaying or Block laying and Concreting, carpentry and joinery, furniture making, machine woodworking, painting and decorating, plumbing and pipe fitting Draughtsmanship craft practice, tiling, Electrical and Electronic, Fabrication and welding, etc.

Olaitan (1991) in his contribution observed that vocational education emphasizes the development of occupational skills needed as preparations for work. Dike (2009), noted that vocational education and training prepares learners for careers that are based in manual or practical activities, traditionally non-academic and totally related to specific trade, occupation or vocation. However, Oke, Adenle and Shobowale (2010) are of the view that technical, vocational educational and training is that aspect of education, which exposes the learners to acquire demonstration skills that could be transformed into economic benefits. Oke ,et al. (2010) defined Technical Vocational Education and Training as programmed designed to impart theory and practical training skills to the recipient, although the programme is capital intensive which requires workshops, laboratories, tools, equipment and machines for training. Finally, Oke, et al. (2010) noted that technical vocational education and training is a comprehensive term involving in addition to financial education, the study of the technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge related to occupation in various sector of the economy and social life.

Specifically, from above, TVETs aims at developing not only practical skills but also attitudes and habits that makes the recipients creative, innovative and resourceful persons. It is a peculiar educational programme that addresses the immediate needs of the individuals in the community.

**The concept of Entrepreneurship programme**

International Labour Organization (2004) defined entrepreneurship education as an area of study that includes those attitudes and skills essentials for responding to one's environment when conceiving, starting and managing a business enterprise. According to Olateju (2003), entrepreneurship education deals with the skills of business ownership and management. Entrepreneurship requires an application of energy and passion towards the creation and implementation of new ideas and creative solution. For example, Lundstrom and Stevenson (2005) defined an entrepreneur by using the terms self-employed, small business owners, small business manager and entrepreneur interchangeably. In the view of Cunningham and Lischeron (1991), an entrepreneur is a person involved in starting, a new organization, which has possession of an enterprise, or venture and assumes significant accountability for inherent risks and the outcome. Hisrich, Peters and Shepherd(2008) defined entrepreneurship as the process of creating something new with value by devoting the necessary time and effort, assuming the financial, physical and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence. Essentially ingredients of entrepreneurship according to Lundstrom and Stevenson (2005) include: the willingness to take calculated risks in terms of time, equity, the ability to formulate an effective venture team, the creative skill to marshal needed resources and finally the vision to recognize opportunities where others see chaos contradictions, and confusion. They further explained that it is the practice of consistently converting goods and ideas into profitable, commercial ventures.

Entrepreneurship simply refers to individual's ability to turn ideas into action. European Commission (2009) opined that entrepreneurial programme and module, offer the beneficiaries the ability to think creatively and become an effective problem solver. Stonehouse and Pemberston (2002) noted that the function that is specific to entrepreneurships is the ability to take factors of production – Land, Labour and Capital and use them to produce new goods and services. Allawadi (2010) observed entrepreneurship to the creation of five basic "how contributions" of the introducing a new product, a new method of production, opening a new market, conquest of new source of supply and creating a new organization. Stevenson and Lundstrom (2002), finally, defined entrepreneurship as a process in which individuals pursue opportunities fulfilling needs and wants through innovation together with attendant risk.

**The concept of Security**

Egbewole (2013) defined security as a states, feelings or means of being secure, while secure means free from danger, safe and assured. It also means things that are done to keep a person, building or country safe from danger, or crime. Dasuki (2013) observed that security of an environment implies a stable relatively predictable environment in which an individual or group of people may pursue legitimate business without harm, disruption, danger, fear of disturbances or injury. He further argued that no nation is free from security challenges.

Insecurity, on the other hand, is a state of fear, deprivation, grave danger, exposure to lack and want, etc.

Nigeria is bedevilled with numerous insecurity challenges caused by a number of factors. Dasuki classified Nigeria insecurity challenges as follows:

i. **Terrorism:** which he described as the greatest and most predominant security challenge exemplified by the wave of insurgence, attack and bomb blast (Boko Haram) in the North East and other parts of Nigeria;
ii. **Maritime insecurity:** This occurs in form of piracy, illegal oil bunkering, oil theft, illegal fishing and hijacking. The activities of our maritime areas is causing the country image loss of revenue and making our ports unattractive to foreign shipping lines/investors. It is estimated that the country loss over N105b to pipeline vandalism annually;
iii. **Niger Delta Militancy:** This is the activities of rouges who disrupt oil production in the Niger Delta. At the peak of their activities, crude production dropped to about 700,000 bpd against 2,000,000 bpd.
iv. **Kidnapping:** This is the apprehension of persons for reason which was initially used by Niger Delta militants through which they can attract attention of the government and oil companies to their struggle for resource control.
v. **Armed Robbery:** This menace became one of the long standing security issues especially after the 1970 Nigeria Civil War, when arms became widely available in the country. It is general believed that youth unemployment and the culture of get rich quick based on greed and corruption which pervades our society today are largely responsible.
vi. **Youth Unemployment:** This is one socio-economic challenge that several governments over the years have difficulty to resolve. These unemployed youths are used as thugs during political campaigns and in time of crisis.
vii. **Porous Boarders:** One of the main security challenges in the country is the wide expanse of Nigeria's porous borders which results in the influx of criminals across the borders and smuggling of goods and arms into the country.

**Statement of the Problem**

Nigerian is currently witnessing high rate of unemployment which tend to lead to insecurity challenges. These insecurity challenges now threaten lives and properties and indeed the peace and tranquillity in the country at large. TVET is believed all over the world to be able to equip its graduates with skills necessary to be self-reliant. However, United Nations Education Scientific and Cultural Organization (UNESCO,2003), observed that TVET programmes have not lead to increasing employment, despite the obvious need for technical and vocational services. This might be largely due to lack of employability and entrepreneurial skills to enable them to be self-reliant. Beyond this foregoing conceptual and theoretical issue, what is happening to technical and vocational education and training and entrepreneurship programmes as regards security challenges in Nigeria?

The purpose of the study is to determine a link between TVET and Entrepreneurship as a panacea to the security challenges in Nigeria through ascertaining:

i. TVET and Entrepreneurship eliminate feelings of doubts about one's own worth and abilities;
ii. TVET and Entrepreneurship eliminate unemployment (joblessness) which may lead to vices like, armed robbery, kidnapping, stealing, drug addictions, etc.
iii. To enhance domestic technologies and socio-economic development through TVET and Entrepreneurship for national growth and security.

**Research Questions**
The following research questions guided this study:

i. To what extent does TVET and Entrepreneurship eliminate feelings of doubts about one's own worth and abilities for sustainable national security?

ii. To what extent does TVET and Entrepreneurship sustain national security through unemployment reduction?

iii. To what extent does TVET and Entrepreneurship sustain national security by enhancing domestic technology and socio-economic development of the nation?

**Hypotheses**
The following null hypotheses were tested at 0.05 level of significance:

$H_{o1}$: There is no significant difference in the opinions of the respondents on the extent to which TVET and Entrepreneurship eliminates feelings of doubts one's own worth and abilities for sustainable national security.

$H_{o2}$: There is no significant difference in the opinions of the respondents on the extent to which TVET and Entrepreneurship sustain national security through unemployment reduction

$H_{o3}$: There is no significant difference in the opinions of the respondents on the extent to which TVET and Entrepreneurship sustain national security by enhancing the domestic technology and socio-economic development.

**Design of the Study**
The study adopted a descriptive survey research design. A survey research design uses questionnaire, interview, observations, setc in order to determine the opinions, attitudes, preferences, and perception of persons. The design was considered appropriate since the study obtained data in the form of opinion or perceptions of persons on the subject matter from TVET Educators and Entrepreneurs on sustainable national security in Nigeria.

**Area of Study**
The study was carried out in North Central States of Nigeria.

**Population, Sample and Sampling Technique**
The population for this study consists of 100 Technical Educators and 100 Entrepreneurs. They are randomly selected from major cities and, Vocational and Technical institutions

across North Central States of Nigeria. Bringing the total population to 200 which was used as the final sample size for the research.

**Instrument for Data Collection**

Questionnaire was used for data collection in the study. It was designed in obtain information on how TVET and Entrepreneurship could be a cure to sustainable national insecurity challenges. It contained 35 structured items that helps in providing information about testing the formulated hypotheses. A 5-point Likert scale format was adopted with response categories of the order, Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD).

**Validation of the Instrument**

The questionnaire was designed by the researcher based on the purpose of the study and research questions. It was given to some senior lecturers in the department of Vocational Teachers Education, University of Nigeria, Nsukka for validation. Their inputs were adopted thus, given the instrument high content validity suitable for use in the study.

**Reliability of the Instrument**

The instrument for this study was pilot tested on 42 respondents who were not later used for the main study. Using the splits-half method of estimating reliability, the data was divided into two equal halves and correlated statistically with Pearson's product moment correlation. A correlation coefficient of 0.98 was found. This figure indicates a high reliability of the instruments used.

**Method of Data Analysis**

The data obtained was analysed with the use of mean and standard deviation. While the hypotheses were tested using Z-test at 0.05 level of significance.

**Results and Discussion of Findings**

Table 1: Test mean responses of Technical Educators and Entrepreneurs on the extent to which TVET and Entrepreneurship eliminates feelings of doubts about one's worth and abilities for sustainable national security.

| Respondents | N | $\overline{X}$ | SD | Df | P | S-error | Z-cal | Z-crit | Decision Rule if $x^2$-calc? $x^2$ crit Accept Ho |
|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurs | 100 | 69.50 | 4.29 | | | | | | |
| Technical Educators | 100 | 63.66 | 3.77 | 81 | 0.05 | 0.89 | 16.81 | 2.00 | Reject $H_{o1}$ |

Significant level = 0.05

Table 1: shows both the mean and the statistical significance of the means of the respondents. From the analysis, it shows that an Entrepreneurs response (69.50) us higher than that of the Technical Educators (63.66) by 5.84 points. This figure was significant at 0.05 level of significance and 81 degree of freedom. Hence, the initial null hypothesis of no significant difference was rejected. The implication is that TVET and Entrepreneurship can possibly

serve as a panacea to sustainable national insecurity challenges through eliminating of feelings of doubts about one's own worth and abilities.

Table 2: Z-Test means of opinion of respondents on the extent to which TVET and

Entrepreneurship sustains national security through unemployment reduction

| Respondents | N | $\overline{X}$ | SD | Df | P | S-error | Z-cal | Z-crit | Decision Rule if $x^2$-calc? $x^2$ crit Accept Ho |
|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurs | 100 | 59.48 | 4.16 | 81 | 0.05 | 0.90 | 21.22 | 2.00 | Reject $H_{o2}$ |
| Technical Educators | 100 | 71.02 | 4.23 | | | | | | |

Significant level = 0.05

Table 2 shows the tested statistics of the opinions of Technical Educators and Entrepreneurs on unemployment reduction. It reveals that the computed differences between their opinions are significant. The null hypothesis was therefore rejected. The implication of this is that both Technical Educators and Entrepreneurs are of the opinion that TVET and Entrepreneurship sustain national security by reducing unemployment rates through job creation and meaningful engagement of trainees.

Table 3: Z-Test of the means of opinion of Technical Educators and Entrepreneurs on the extent to which TVET and Entrepreneurship sustain national security by enhancing domestic technology and socio-economic development

| Respondents | N | $\overline{X}$ | SD | Df | P | S-error | Z-cal | Z-crit | Decision Rule if $x^2$-calc? $x^2$ crit Accept Ho |
|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurs | 100 | 69.28 | 4.81 | 81 | 0.05 | 0.84 | 22.74 | 2.00 | Reject $H_{o3}$ |
| Technical Educators | 100 | 53.92 | 5.10 | | | | | | |

Significant level = 0.05

Table 3 shows Z-test calculated value of 22.74 and Z-critical value of 2.00 at 0.05 level of significance, and 81 degree of freedom. Comparing the means of the calculated and critical values, it indicates that the difference of the means is significant. Hence, the null hypothesis of no significant difference is rejected. This means that TVET and Entrepreneurship can sustain national security by enhancing domestic technology and socio-economic development.

**Summary**

This research has revealed that TVET and Entrepreneurship has the potentials to sustain national security challenges in Nigeria. The followings are the implications:

The administration of TVET and Entrepreneurship knowledge and skills, will sustains national security through socio-economic transformation and self-reliance.

The respondents have common opinions that TVET and Entrepreneurship can reduce unemployment through job creation. TVET and Entrepreneurship can sustain national security through enhancement of improved local agricultural produce; managerial skills of entrepreneurs; domestic technology; international standard practices in processing and packaging of local produce, and overall socio-economic development of the nation.

**Conclusion**

It is now obvious that TVET and Entrepreneurship programmes can contribute substantially to sustainable national security and socio-economic development of Nigeria through the developments of knowledge and manipulative skills for job creation and poverty reduction that leads to self-reliance. Also with TVET and Entrepreneurship programmes in place, local agricultural produce, managerial skills of entrepreneurs and indigenous technology are improved. This will among other strategies solve the insecurity challenges in Nigeria.

**Recommendation**

Based on the findings of the study, it is therefore recommended that: the federal government should establish TVET and Entrepreneurship centres in the six geopolitical zones of the country. The objectives of these establishments should be for business and manipulative skills acquisition. TVET and Entrepreneurship should be recognized and integrated seriously as a basic instrument for poverty eradication in both national and rural socio-economic transformation policies of the government. Government should establish legal framework on socio-economic transformation policies and strategies formulation, to ensure consistency and continuity of private sector interests and investments in TVET and Entrepreneurship developments. Content developers of TVET and Entrepreneurship programmes should facilitate access and enhancement of the trainings in Nigeria rural communities, by developing contents that can be read, and understood in the local languages. Qualitative and performing TVET and Entrepreneurship education instructors should be provided by the government. Adequate and good learning materials and environment should be provided for TVET and Entrepreneurship programme.

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# ENGLISH AS A SECOND LANGUAGE OFFERING IN SOUTH AFRICAN HIGH SCHOOLS: IMPLICATIONS FOR QUALITY EDUCATION AMONG MEDIA STUDENTS

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**Abstract**
This paper examines the quality implications for offering English as a Second Language in South African schools on the academic performance of media students at the University of Limpopo. The University's admission criteria, inter alia accommodates a significant number of learners with admission grades (4-7) in English as a second language to pursue a qualification in Media or Communication studies. However, preliminary observations show that a majority of these students can hardly speak or write competently in standard English and this often contribute to their failure to adequately apply the journalistic or professional style of practice. This occurs in respect of the fact that the current language policy framework recognises the broader linguistic context within which South African learners engage with curricula from their early stage to the senior phase. Numerous scholars have also acknowledged that the use of the second language as a medium of instruction particularly in the early years of learning has the potential to create performance challenges for such learners. Apparently, for the majority of learners whose first language (L1) is not the main medium of instruction (L2) that cuts across the curriculum, the experience of learning in English comes with great challenges. The study used a random total sample of 20 final year (3rd year) media students who enrolled with English as a second language (n-10) and another (n-10) who did English language (L1) at Grade 12 level. Both groups were exposed to a three-session feature story writing short course after which an individual assessment was administered and assessed against a self-improvised code of practice rubric. Qualitative content analysis results revealed that the majority (70%) of students who enrolled with English as a second language (L2) experienced serious grammatical and editorial challenges in their writing when compared with their (L1) counterparts (20%). The study concludes that there are critical academic implications for learners admitted with English (L2) requirements into the media studies degree programme. Hence, the study of English language as a compulsory module for all media students is highly recommended for at least two academic years.

**Keywords:** English as second language, language proficiency, journalism, feature story, quality education

## 1. INTRODUCTION

Several scholars have highlighted the challenges associated with the transition which English second language (ESL) students encounter when using English as the medium of instruction in the South African higher education system (Brock-Utne, 2010; Nel & Muller, 2010). They have noted the arduous linguistic, cognitive and social transition that such students undergo in order to cope with university demands. This is in light of the fact that most of the teaching staff at university use a highly pitched and proficient academic English to deliver lectures. This makes it difficult for English (L2) students to adapt to university standards where they are expected to access information from journals and books independently as well as construct meaning and generate new knowledge. Following this, these students "are often

labelled as at risk or disadvantaged" (Nel & Muller, 2010) and often need additional support to upgrade their cognitive academic language skills. The latter scenario is a clear acknowledgement of their limited English proficiency which in turn tends to negatively affect their ability to understand and engage in other academic activities.

The difficulty to effectively benefit from the learning process can be explained in terms of language proficiency because language acts as the basic communication channel for knowledge transfer in education. Language proficiency obscures and hinders the knowledge communication channel, resulting in the learning process being impeded. This is often compounded by large class sizes with a high proportion of English second language (ESL) students (Lessing & Mahabeer, 2007) and poor English language proficiency transfer from the teacher to the learner in the initial years of basic education (Nel & Muller, 2010). This has resulted in students experiencing problems with respect to poor language skills including restricted vocabulary, spelling, punctuation and basic comprehension competence.

Although most students with an African language as their first language do prefer to be taught in English in university, evidence shows that it takes longer to learn in a second language (Nel & Muller, 2010). In spite of their encounter with the language at an early age (Grade 4), the exposure only facilitates "to develop their interpersonal communication skills in English, meanwhile the cognitive academic language skills remain undeveloped (ibid p13). This supports the view that poor matriculation pass rates can be explained in terms of the *reading-to-learn* barrier to academic performance. This often results in poorly equipped students entering higher education institutions without adequate prerequisite skills to enable them to meet the intellectual demands of academia or university education (Nel & Muller, 2010). To this end, the paper focuses on how English as a second language offering impacts on the acquisition of journalistic skills among media students at the University of Limpopo.

## 2. PURPOSE OF THE STUDY

### 2.1 Aim of the study

The study examines the quality implications for English (L2) acquisition on the academic performance of media students at the University of Limpopo.

### 2.2 Objectives of the study

- Compare and contrast the editorial skills displayed by English (L1) and English (L2) media students in news report writing.
- Determine the language barriers that inhibit media students' career competences towards effective journalistic practices.

## 3. LANGUAGE POLICY, PROFICIENCY AND CAREER TRAINING

### 3.1 The language in education policy and language proficiency paradox

In the contemporary world, it has become important for every society to enact and uphold a language policy (including language(s) of instruction) that recognises the broader linguistic context of its communities. Nonetheless, the current global context demands that citizens have not only access to a language of wider currency but also proficiency in that language (Desai, 2010). In the context of South Africa, the majority of learners have a dual responsibility to develop competent knowledge in their mother-tongue and also in English as the language of communication and education. Unfortunately, this happens in an environment where ESL has been taught to a predominantly black population by teachers who themselves

are not proficient in the language. This has made exposure to English teaching and learning to remain limited for the majority of black learners, particularly in rural areas (Makalela, 2005; Desai, 2013).

Post 1994, the new language in education policy of 1997 in South Africa stipulates that learners must pass two official languages from Grade 10 to Grade 12. Notably one subject should be on the first language level whereas the other is on the second level. Subsequently, the level of achievement required for promotion shall be determined by the Provincial Education Departments (Department of Education (RSA), 1997, p 5-6). Currently, the level is 30% in the 2nd language and 40% in the 1st language. Apparently, below Grades 10-12 levels, learners study only one language which is compulsory for promotion purposes with the assumption that language development would take place in content subject teaching and learning. For this reason, it would not be necessary for learners to demonstrate their proficiency through language as a subject (Desai, 2010). This has compounded the poor learning conditions that exist in most schools, where language development among learners particularly English, continues to be adversely affected.

Despite the progressive intent of language in education policy to facilitate learning and to promote a multi-lingualism context, the choice of languages in South African schools is currently influenced by global imperatives (Desai, 2013). Although it is not explicitly stated in policy that English should be the language of instruction after Grade 3, most parents deem the use of indigenous languages as mediums of instruction as menial (Makalela, 2005). Instead, both the latter and school governing bodies in many schools have preferred the use of English as a medium of instruction for their children. Apparently, they look down on African languages as inhibiting learners' access to lucrative socio-economic avenues associated with competence in English (Desai, 2010, p 107). Hence, the trend has been gradually slanting towards a mono-lingualism practice where English dominates other languages.

### 3.2 Effect of English language proficiency on career training

For most countries in the world today, let alone those in the commonwealth fraternity, English has become the *lingua franca* of daily communication and transaction (Brock-Utne, 2010). Eminently, the language is at the centre of the global markets and any meaningful bi-lateral or multi-lateral relations among the global citizenry often demands proficiency in English. In the field of education and professional training, this has a direct bearing on the performance of learners who, because of their linguistic background, have to grapple with overcoming 2nd language learning barriers before they can compete on an equal footing with their home language counterparts (Desai, 2010). In the South Africa context where the majority of schools and universities teach in English, indigenous language speakers often experience challenges throughout their educational training. This results from the dominance of English which some scholars refer to as some form of "intellectual dependency in that it (English) is perceived to be the gatekeeper to academic knowledge" (Desai, 2010, p 108). In practical terms, this means that, as an epistemological catalyst to educational success, English language aptitude among 1st language speakers makes them "winners" over those whose home languages are not used for teaching and learning (Nomlomo, 2007).

A study by Kaliyadan, Thalamkandathil, Parupalli, Amin, Balaha & Ali (2015) shows a significant positive correlation between the score in English language assessment and the final summative marks of medical students in Saudi Arabia. It highlights the need to address

English language proficiency challenges among medical students where the native language(s) and medium of instruction in basic education is not English. Another study conducted at King Saud bin Abdul Aziz University for Health Sciences assessed the correlation of pre-medical English courses with that of the basic science courses of 2nd and 3rd year students. The study established a positive correlation between English proficiency and good performance in all 2nd and 3rd year courses. In full acknowledgement of the effect of proficiency in the medium of instruction on students' academic performance, a standardised English examination was recommended for entry into the medical programme (Kaliyadan et al., 2015). Thus, to a large extent English language proficiency has a negative impact on the academic performance of non-English speakers as it hinders effective practical application of knowledge and skills in professional training.

### 3.3 Language implications on journalistic practice

For students of media and journalism, mastery of the English language and its accompanying grammatical orientations is a critical element of their professional practice. This is important for their readiness to join the job market as media liaison officers, journalists, corporate or government spokespersons, marketing and brand ambassadors, broadcast media producers and presenters. Essentially, these careers demand that students master the basic craft of news writing and critical application thereof. However, media and journalism scholars have noted that most students are poorly prepared to write stories that focus on crafting narratives and presenting in-depth reports that go beyond mere facts to interpret events against their background (Greer, 1999; Nel, 2005). In addition, preliminary observations show that a majority of them can hardly speak or write competently in Standard English and this often contribute to their failure to effectively apply the professional style of practice. Therefore, today's media workers operate in a complex environment that requires a broad knowledge base, technical knowhow as well as high competence in linguistic skills.

## 3. METHODOLOGY

This is a descriptive qualitative content-analysis study on the implications of English (L2) studies on the professional training of media students of both genders for the Print Journalism module (HMDA 031) at the University of Limpopo. From a sample population of 148 final year (3rd year) students, the study randomly sampled (n-10) participants who enrolled with English (L1) and another (n-10) who enrolled with English (L2) at the Grade 12 level. Both groups were exposed to a three-session coaching course on feature story writing.

The feature story was purposively selected because the genre allows the writer more opportunity to experiment with different editorial angles to the story and with language usage (Greer, 1999, p 132). This element suits the purpose of the study because it adds to the human interest factor which time and space do not allow for other story genres. An individual feature writing task (450-650 words) was administered and assessed against a self-improvised code of practice rubric where all participants' scripts were coded (CD), for example from Eng L1CD 01-10 and Eng L2CD11-20 to avoid reference to participants' personal details. The coaching clinic was based on the following areas:

- **1st Coaching session {Idea formulation stage}**

This session entailed the definition of news and the news selection criteria in a typical South African newsroom. Students were exposed to three types of feature sub-genres namely, the profile, trend and editorial. Emphasis was given towards coverage of a variety of topics and feature conventions. The presentation also addressed the basic questions in the news

formulation process as determined by the 5Ws and H (What, Where, When, Who, Why & the How elements of the story?).

- **2nd Coaching session {Reporting process}**

This was an explanatory session on the editorial values of objectivity (impartiality, fairness and unbiasness) or truth in news production. Tips for good news writing were provided accompanied by samples from local newspapers based on at least two story formats. More significantly, students were coached on news (feature story) presentation skills and styles. This involved writing a *lead* or *intro*, stating facts and use of sources, balancing the argument, and tying up (resolution).

- **3rd Coaching session {Language proficiency}**

The editorial aspect of this session demanded the student to express his/her ideas in a grammatically free write up with due diligence to spell check, punctuation (including capitalisation, quotation marks) and application of English language basic grammar rules. Emphasis was put on keeping sentences short and simple, use of the active voice, linked sentence-idea transition, avoiding repetition and confusing constructions. Two practical examples were given and students were allowed a pre-assessment day to exercise their writing skills before presenting their final feature stories.

## 4. RESULTS AND DISCUSSION

From the 20 participants selected for the study, 17 scripts were considered for analysis whereas (n-3) were not. One (n-1) script was discarded because it was illegibly written and did not fit within the scope of the feature prescripts. The outstanding two (n-2) participants did not submit their stories for assessment. Out of the 17 scripts were 7 English (L1) and 10 English (L2) participants. The form for presentation of the scripts was optional, either printed or handwritten for all participants.

### 4.1 Story genre conventions and idea formulation

Of all the articles (n-17) presented for assessment, there were a variety of topics chosen for feature headlines which emphasised what was new and important. This included feature stories about politics, climate change, road safety, sexuality, migration issues, health, mining et cetera. In addition, all articles were located within the feature story genre. The following analysis is based on the crafting of headlines, the human interest element and the 5Ws and H criteria as critical aspects of genre conventions and idea formulation.

### Headlines

Since the purpose of a headline is to capture the essence of the entire story, the assessment criteria required participants to summarise the story for the reader, attract the reader's attention and give prominence to the story (Muswede, 2010). Thus all headlines were checked for readability which is a combination of intelligibility, sensibility and use of the active voice. Fifteen headlines were classified as "outright sentences" rather than "catchy phrases" that resemble standard headlines. For example, some headlines read: *An accident that happened in Mankweng left a Premier dead (Eng L2 CD10); There are many people who still do not understand climate change (Eng L2 CD12)* and *A serious attack on a depressed person led to a loss of life (Eng L2 CD01).* On the contrary, there were two (n-2) outstanding headlines from participants Eng L1CD03 (racism) and Eng L1CD09 (Health) which read *Racism spat derails school programme in Westernberg* and *Wrong prescription kills five in*

*Limpopo.* Based on these headlines, it is evident that the majority of participants who wrote unattractive headlines lacked good command of vocabulary which could summarily create interest and arouse readers' curiosity to read their stories (Greer, 1999, p 143). However, the outstanding two headlines highlighted above demonstrate the participants'' ability to use synonyms that could serve to replace many words or sentences to present distinctive thought-provoking headlines.

**Human interest and 5Ws and H**

The human interest aspect of a feature story was used to assess the participants' ability to locate their articles within the appropriate conventions of the genre and to assess their lingual-journalistic abilities. All stories but one, captured the human interest flair. The article on climate change (Eng L2 CD15) was accepted on the basis of its news value but lacked the human interest element. However, the ability to infuse the 5Ws and H is critical as it forms part of the story *Intro* or *Lead.* Participants had to know that the immediate use of the 5Ws and H was applicable to other story genres such as the news story and not to the feature story. Hence, they had to creatively craft a lead with a delayed 5Ws & H and this depended greatly on one's familiarity with stylistic and idiomatic expressions. The grammatical implications of this aspect is discussed in detail in the section about presentation style and articulation. Suffice it to say, a majority of the Eng L2 code participants (n-8) included the first 4Ws in their reports but had difficulty incorporating the *why* and *how* elements due to restricted writing skills.

**4.2 Objectivity, presentation style and articulation**

This section took into account how participants crafted their reports in terms of objectivity, structure or style, argumentation and resolution. The language demands required journalists to choose specific context-based constructions to articulate their narratives and meaning to the readers without edging on ambiguity, legalities or prejudice (Rhodes Journalism Style Guide, 2004).

**Objectivity**

Objective reporting demands that journalists make a deliberate effort to write accurately, factually, fairly and avoid bias as opposed to being subjective. A total of seven (n-7) reports were classified as imbalanced, not fair and based on personal bias (Eng L2CD01, 03, 06, 07, 09 and Eng L1CD13 and 17). This was evident in the choice of phrases such as *I believe the nurse was on Facebook*; *the teachers are lazy; the government is corrupt* as well as use of personal or collective pronouns such as *l, we and us* in the text. This demonstrates that these participants could not distinguish objective from subjective reporting. While most stories were presented accurately in terms of dates, time, location of events and names of persons involved, 13 of the reports missed it on context which should provide a background or surrounding circumstances to the story. The former aspects are easy to list because they usually involve one word or two whereas the latter demand an elaborate description of the account in question. Thus, only four (Eng L1CD01, 04, 07 and 09) attempted to provide a context to their stories.

**Presentation style**

Although a feature story thrives on the individualist style, it essentially reflects the major elements of hard news as well as soft news. Therefore, the presentation styles applicable to the latter two are often applied to features too, particularly the inverted pyramid and the

champagne glass. Notwithstanding, the most valuable issue in this regard was how the story information was organised or ordered. The linguistic demands on the student were story development including coherence and transition. It is upon these elements that the storyline and argument unfold through to the end. Fifteen (n-15) of the participants adopted the inverted pyramid structure for its easiness to organise information whereas two (both L2 participants) adopted the champagne glass. The latter is a more inventive story structure preferred by good writers who have mastered the skill of prioritizing the flow of ideas. Nonetheless, both styles enabled participants to present their stories according to a clear logical outline except that the champagne glass closes the story with a *kick* or strong ending.
The lead is the first sentence that summarises the salient issues in the story and is characterised by 5Ws and H. As noted above, all participants (n-17) included vivid detail on the *who, what, where* and *when* elements about their reports, but eight (n-8) of them missed the *why* and *how* aspects. Essentially, the latter aspects require more than just stating names and locations but demand use of connectives e.g. *that or which*; adjectives, clauses e.g. the man *who was* teaching the class; prepositions and correct use of articles etc. A majority of Eng L2 participants struggled to keep their leads short, clear and precise as demonstrated below:

Eng L2 CD13 (Passive sentence and unnecessary wording).
Wrote: *She was not responding because she is coming from the rural areas.*
Instead of: *She did not respond because she comes from the rural areas.*

Eng L2 CD17 (Redundancy)
Wrote: *The beating took at least a maximum period of 20 minutes.*
Instead of: *The beating took at least 20 minutes.*

Eng L2 CD12 (unnecessary article and wrong preposition)
Wrote: *The climate change are gradually causing poverty in poor countries.*
Instead of: *Climate change is gradually causing poverty in poor countries.*

As a result of the above and related challenges, participants' *intros* were less interesting and did not report on the actual actions. Meanwhile, stories were riddled with clichés that could have been avoided.

**Argument and tying up**

The *argument* refers to the body of the story that comprises a group of statements, supported by reasoning, that together make a particular claim (Greer, 1999, p 78). The linguistic demands involve critical thinking skills that are premised on different propositions to convince readers about a particular claim. Therefore, the assessment looked for answers to questions such as *what is being proposed, why was it said, does the author agree or not* and *giving reasons for either agreeing or disagreeing with the proposed views?* Although this was a difficult task for both groups, most of the participants (n-8) from the Eng L2 group seemed not to be mindful about arguments. They encountered challenges in supporting their claims or propositions most of which were embedded in vagueness and ambiguity. Some of the notable gaps in their sentences included limited use of words or phrases such as *because …, for this reason…, however…, although… etc*. which would solidify their synthesis of the argument.

Interestingly, nearly all (n-16) reports demonstrated conscious *kicks* (strong ending) at the end of the stories albeit in varying degrees of creativity. In Nel's (2005, p 93) view, the kick is some kind of a deserved reward for readers who would have kept reading up to the final line of the story. Often, most writers wrap up feature stories by citing a striking source or refer to some authoritative voice as a "resolution" or concluding statement to the story. Some of the examples of *kicks* and their accompanying weaknesses are provided below for analysis:

Eng L2 CD07 {Subject: Mining} (Problem: too long citation)
Wrote: *Minister Zwane expressed concern that it is worrying that we are seeing such serious accidents so early in the year, we urge all parties to continue prioritizing safety, so that we can realise our ultimate goal of zero harm.*
Word count: 39
Instead of: *Following these unfortunate incidents in the sector, Minister Zwane urged all stakeholders to prioritize maximum safety in the mines to prevent any further loss of life among workers.*
Word count: 28

Eng L2 CD10 {Road safety} (Problem: staggered resolution & passive *kick*)
Wrote: *The police spokesperson (Captain) Jerry Ndlovu said "all the truck drivers after 300km must take a rest of at least 3 hours before heading (back) to the road again … The truck driver was arrested and will appear in the magistrate court on 29 of July 2016. A case of culpable homicide was opened against the truck driver.*
Instead of: *Acknowledging the link between road carnage and fatigue among drivers, SAPS spokesperson Captain Jerry Ndlovu implored all truck drivers to take ample rest after every 300km. He further confirmed that the driver was already in police custody awaiting to appear before the Polokwane magistrate court on 29 July 2016 for culpable homicide.*

The examples above are excerpts from Eng L2 participants showing how candidates failed to wrap up their work due to lack of summary writing skills (39 Vs 28 words) and inability to link their sentences.

### 4.3 Editorial and grammatical orientations

This section looks at how participants reported in relation to tense, spelling, punctuation and readability. While the first three elements may be familiar, readability ensures that, the work is incisive and good to read in terms of choice of vocabulary, variety, transition and using the right tone.

**Tense and spelling**

A majority of Eng L2 participants (n-9) had more than one tense in their reports (See example Eng L2 CD07). Participants seemed not to have planned on presenting a single or central idea to help them hold on to one tense form. Often their articles straddled between two or more tense zones from past to present-perfect and present tenses. This led to lack of consistency in their narratives as they swayed from one tense to the other thereby compromising on objectivity and causing readers to lose track of their story.

The study also noted that most stories had good spelling except use of American English terms instead of the recommended British English version. Hence, words such as *labor, organization, center, etc* were used in instead of *labour, organisation and centre* in stories

from both L1 and L2 participants. Gross spelling mistakes were noted in English L2 students' stories as a display of not only lack of responsibility but also undue diligence to detail. An average of three (3) spelling errors were noted in the Eng L2 reports as compared to 0.5 from the Eng L1 reports. Some of the misspelled words are: Premier (*premiere*), losing (*loosing*), committee (*commitee*), appreciate (*apriciate*), assess (*access*), machines (*matchines*), maintenance (*maintanence*) etc. Thus, beyond damaging the author's credibility, wrong spelling often leads to embarrassment and possible legal action against the newspaper especially where names and titles are involved.

**Punctuation and readability**

Although different newspapers usually develop own stylebooks to suit their contexts, participants were encouraged to adopt the common style for their copy stories. All (n-16) but one report had a full stop at the end of every sentence except where abbreviations were involved e.g. *Dr., Mr., Adv., etc*. While the latter affected both groups equally, Eng L2 participants experienced serious problems where the comma, apostrophe, quotation marks, colon and capitalisation were involved:

Eng L2 CD12 (Capitalisation & abbreviation)
Wrote: *Former president MR Mandela led the country by example.*
Instead of: *Former President Mr Mandela led the country by example.*

Eng L2 CD16 (Comma, apostrophe & readability)
Wrote: *Two hours after taking the wrong medication the patient reported the incident to the responsible nurse' employer. The MEC when she came said we are going to dismiss with immediate effect the nurse concerned.*

Instead of: *Two hours after taking the wrong medication, the patient reported the incident to the responsible nurse's employer. Upon arrival, the MEC said "the employee will be dismissed with immediate effect".*

The above sentences reflect on some of the language barriers (stylistic) that deterred students from writing incisive sentences. This in turn negatively affected the process of constructing concise feature stories. For most Eng L2 students, their sentences were often too long, relied on similar words, lacked correct word order compounded by poor transition.

## 5. LIMITATIONS OF THE STUDY

Not all sampled participants (two Eng L2 and Eng L1) attended all three sessions. This may have compromised the quality of their feature stories since the write-up was based on the coaching sessions that preceded the writing process.

## 6. CONCLUSION

The study observed that a majority of English (L2) media students often experience serious language related problems in their educational training as aspiring media practitioners. This relates to both their ability to master editorial and grammatical orientations as critical elements in the career development of professional journalistic practice. Their work was acutely distinguishable from their English (L1) counterparts who displayed modest cognitive academic language proficiency which enabled them to present better feature writing skills. This distinction, particularly in editorial skills demonstrates the critical background

relationship between language acquisition and students' future academic performance. As such, the study concludes that there are critical academic implications for media students admitted with English (L2) into South African universities. It recommends that English language be offered as a compulsory module for all media students for at least two academic years.

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# STUDENT ENGAGEMENT IN THE FLIPPED CLASSROOM

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## ABSTRACT
The purpose of this study is to investigate whether flipped classroom engages students in the mathematics course. The mixed method was used. Participants were 191 students registered for flipped undergraduate mathematics II course at a study university of technology in South Africa. In order to establish engagement among students, a flipped learning approach was adopted and the Technology-engagement Teaching Strategy (TETS) with the aid of clickers was used in the classroom. In order to establish the changes in students' academic performance weekly Clicker Continuous Assessments (CCAs) were conducted. A survey questionnaire was also administered. Students' experiences of using clicker mobile technology in a flipped mathematics course were also surveyed using a questionnaire. The results indicate that most students (74.3%) felt that clickers assisted in paying more attention to what was happening in class. They (70.1%) understood the concepts better, (75.2%) revealed that clicker mobile technology enabled classroom discussion; clickers increased interactions in the classroom and assisted them in learning. Furthermore, the results also showed that using clickers tends to enhance students' mathematical communication skills, and help to develop the skills needed to write as well as read mathematical proofs. It is recommended that higher education institutions support the flipped classroom approach to promote engagement as well participation among students and provide appropriate technology for positive outcomes.

**Keywords**: Student engagement, flipped classroom, clicker technology and higher education

## INTRODUCTION
Higher education institutions are constantly confronted with the challenge of improving student learning and to demonstrate programme effectiveness (O'Flaherty & Phillips, 2015). Concerning these challenges Simelane-Mnisi and Mji (2016) pointed out that students are not learning the written communication, critical thinking as well as complex reasoning skills thought to be at the core of higher education. Literature revealed the concerns about the quality of higher education that have triggered several calls for transformation (O'Flaherty & Phillips, 2015; McLaughlin, 2014). In this case education is being required to modify the manner that meet the conceptual needs of the 21st century to better prepare students for success in today's global economy (Strydom & Mentz, 2016). South Africa is also experiencing the similar predicament. In this regard, Strydom and Mentz (2016; Simelane-Mnisi and Mji (2016) state that it is critical that South African higher education understands and improves the design of the student experience that will give the students the opportunity to participate in activities that will contribute to their improved chances of success and citizens needed in the 21st century learning. O'Flaherty and Phillips (2015) and Mnisi (2015) claim that although lecturers have access to various technology-enhanced teaching tools, it is generally a fact that the pedagogy is not about the technology.

Literature refers to engagement as the time and effort that the students invest in studies and other activities that lead to their success (Heaslip, Donovan, Cullen, 2014). These authors opined that engagement stimulates reflection and action by the Higher Education Institutions (HEIs) in relation to best practice. It is reported that engaged students show great

commitment to tasks, put in more effort and are emotionally invested in learning, intrinsically motivated as well as more attentive (Hunsu, Adesope & Bayley, 2016). These authors stated that engagement is positively connected with desirable learning outcomes such as academic performance, retention, perseverance, satisfaction as well as higher graduation rate. In this regard, Zepke and Leach (2010) define student engagement as students' cognitive investment in active participation in and emotional commitment to their learning as well as students' involvement with activities and conditions likely to generate high quality learning. In supporting Zepke and Leach, Trowler and Trowler, (2010) further define student engagement into three dimensions such as student engagement in individual student learning; student engagement with structure and process; student engagement with identity. In this study student engagement will focus on students' cognitive investment in active participation and involvement with activities in their learning with an aim to generate high quality learning that give students an opportunity to participate in the demand of the 21st century.

Currently, the popular trend in educational technology is a flipped classroom method. In the flipped classroom, the content delivery is assigned as homework or pre-classwork in a form of a video or online learning material or lecture notes and assignments are completed as classroom activities in-class as well as after-class (Schell & Mazur, 2015; Simelane-Mnisi & Mji, 2015). In fact, when using flipped classroom method of teaching and learning, lecturers provide the learning content to the students before the actual teaching. Students engage with the learning content outside the classroom by using videos, online lectures in CD-ROMs or in the learning management system, webinars, podcasts and blogs to learn about the subject matter. In-class, students participate in activities that foster engagement, communication, collaboration, critical thinking and solve problems (Simelane-Mnisi & Mji, 2016).

This paper reports on how flipped classroom engages students in the mathematics course using Technology-engagement Teaching Strategy (TETS) with the aid of clickers with second-year students. In order to establish engagement among students, firstly, a flipped learning approach was adopted and the TETS with the aid of clickers was used in the classroom. Secondly, in order to establish the changes in students' academic performance weekly Clicker Continuous Assessments (CCAs) were conducted. Finally, a survey questionnaire was administered to examine students' experiences of using TETS with the aid of clicker in a flipped mathematics classroom.

## LITERATURE REVIEWED

### Student engagement

Literature reveals that one of the basic components of effective teaching is student engagement and that engagement is critical for learning (O'Flaherty & Phillips, 2015). Research show that students' engagement has been well researched (Zepke & Leach, 2010) and that several approaches to engagement exist such as student agency and motivation, the manner lecturers practise and relate to their students, the roles of institutional structures, cultures socio-political context in which education and engagement take place and the impact on students of environmental factors such as family background and economic status. Trowler and Trowler (2010) point out that engagement improves outcomes. This authors are supported by the seven effective practices in undergraduate teaching and learning as indicated by (Chickering & Ehrmann, 1996). Those practices include student-staff contact; active learning; prompt feedback; time on task; high expectations; respect for diverse learning styles; and cooperation among students.

Zepke (2015) maintains that in numerous developed countries student engagement leaves large footprints in their higher education landscape today. Therefore, students' interaction with lecturer has been shown to have a powerful impact on learning (Trowler & Trowler, 2010). In this case, these authors indicate that students are mostly presented as the customers of engagement, rather than co-authors. In the study on student engagement and higher education Zepke and Leach, (2010) which involved various research literature from different countries such as USA, Australia, United Kingdom, New Zealand, South Africa, China, Spain, South Korea, Israel, and France. Their results showed the four research perspectives as well as ten proposals for action to the complexity of engagement. Those included motivation and agency: Engaged students are intrinsically motivated and want to exercise their agency, Transactional engagement: Students and teachers engage with each other, institutional support: Institutions provide an environment conducive to learning as well as active citizenship: Students and institutions work together to enable challenges to social beliefs and practices.

Heaslip, Donovan and Cullen (2014) asserted that in-class passivity among students in higher education is a growing problem. In order to reduce this challenge in teaching and learning these authors indicate that clickers have been found to be a technology that can alleviate the problem (Grzeskowiaka, et al., 214, Simelane & Skhosana, 2012, Simelane-Mnisi & Mji, 2014). Furthermore, clickers have the potential to increase student engagement and participation in the classroom (Heaslip, Donovan & Cullen, 2014). This is supported by (Hunsu, Adesope & Bayley, 2016; Simelane-Mnisi & Mji 2016) and further indicate that clickers have been widely adopted by many lecturers with an aim to improve academic performance through student engagement.

**Flipped classroom**

Sletten (2015) opined that students in the flipped classroom study the course concepts or watch a video before coming to class. In-class, the emphasis is on activities that expect them to engage, communicate, work collaboratively, solve problems, and participate during the lecture (Educause Learning Initiative, 2012). In this instance, prior knowledge is required to scaffold deeper learning. In this regard, class time is used for clarifications, reflections, applications and evaluation (Miller, 2012). In the flipped classroom the lecturer, utilise the just-in-time teaching approach which is guided the by questions (Simelane-Mnisi & Mji, 2014). The lecturer teaches by question to determine whether students did the prior learning and are able to solve problems. In this study the engagement in-class time was fostered by TETS with the aid of clickers. So, the flipped classroom encourages student centred approach, heutagogy, and self-directed learning and it is technology-driven.

The flipped classroom approach enables lecturers to move from the teacher-centred or lecturer-driven approach to student-centered learning. Hamdan, McKnight, McKnight, and Arfstrom (2013) reported that several technologies help in the Flipped learning model. These technologies, assist the lecturers to shift direct learning out of the large group learning space and move it into the individual learning space (Hamdan et al., 2013). So, the flipped classroom approach (Miller, 2012) encourages lecturer to consider the need to know the content that is recorded by using a pedagogical approach that demands engagement. Furthermore, Miller, (2012) encourages lecturer to select the appropriate technology that support the flipped classroom such as pre-classwork asynchronous video lecture or podcasting and the in-class activities using technologies that encourage participation, engagement and provide immediate feedback such as clickers, poll anywhere, mobile phone,

iPads and tablets (Stowell, 2015). With such technologies, lecturers are encouraged to build in reflective activities. Finally, lecturers are advice to use the blended learning environment of learning management system as well as YouTube videos that will provide the time and place to watch the videos. Miller (2012) argues that the flipped classroom approach does not solve any of the problems encountered in education, but it lends itself as an approach or a great first step in reframing the role of the lecturer in the classroom. In fact, flipped classroom assist to shift a classroom or learning culture towards student construction of knowledge rather than the lecturer imparting knowledge to students. During class contact sessions, lecturer functions as coaches or advisors (Educause Learning Initiative, 2012).

### Live interactive teaching using clicker mobile technology

The latest generation of clickers are developed on the power of the Internet and mobile devices (Simelane-Mnisi & Mji, 2016). These mobile devices allow students to respond to questions in class by using designated smartphone polling apps or using a mobile device's web browser and internet connection, text messaging and calling a phone number. These technologies bring about live interactive teaching and learning in-class with meaningful feedback to the lecturer and students (Mnisi, 2015). Live interactive teaching means that all interactions are within the lecture room and both the lecturer and the students use various responsive devices such as clickers, mobile phones, tablet computers or iPads at the same time. These responsive devices enable interaction which is important because these devices allow learning to be more authentic as well as promote the active participation and involvement of students (Simelane & Skhosana, 2012). It is reported that in live interactive teaching, the focus is on assessing individual knowledge construction through active cognitive engagement, higher-level thinking and critical thinking (Chen & Pedersen, 2012). Stowell (2015) posit that clickers and mobile devices can be used side-by-side in the classroom due to some technical difficulty brought about by these technologies. In this case (Stowell, 2015) argued that when using mobile devices in-class, it is important to ensure that the classroom has sufficient Wi-Fi access and internet bandwidth. The lecturers are encouraged to give students time to bring their device out of sleep mode during the classroom (Stowell, 2015). In this regard, Wong (2016) is of an opinion that when used as a polling device, mobile devices may currently be less reliable than traditional radio-frequency clickers.

## METHOD

The question posed in this study is: How are students engaged in the flipped mathematics classroom? In order to answer this question a mixed method approach was used. Data were collected by means of a survey questionnaire which included the open-ended and closed questions as well as three clicker continuous assessments (CCA). The quantitative data were analysed using Statistical Package for Statistics Software (SPSS) version 21 using frequency distributions including percentages. The qualitative data was analysed using qualitative analytical software, Atlas.ti 5.1.

## PARTICIPANTS

Purposeful, convenience and probability sampling were used to select the participants. Participants were 191 students registered for Mathematics II at the study University of Technology in South Africa. These students were enrolled for the Diploma in Electrical Engineering and Surveying where mathematics is a prerequisite. As a prerequisite, the implication is that students cannot proceed without passing the subject. Of the participants, 108 (56.5%) were female and 45 (23.6%) male, while the rest did not disclose this

information. Their ages ranged between 18 and 35 years (M = 21.0 years, SD = 2.2) while 24 students did not indicate their age. The results revealed that 126 (66.0%) of the students indicated that they were registered for the course for the first time, and 49 (25.6%) of the students revealed that they were repeating the course. while (8.4%) did not disclose their registration status.

## INSTRUMENTS AND PROCEDURE

Data were collected by means of three CCAs as well as the survey questionnaire.

### Clicker Continuous Assessment

Three weekly CCAs were conducted. The aim of the CCA was to ensure that students study the pre-recorded lecture prior to class contact. Furthermore, CCA aim was to emphasise the need to know the content that is recorded by using TETS with the aid of clickers. TETS with the aid of clickers demanded that students interact and engage during the class. In this case, in-class time clicker exercises, group discussion as well as peer discussion were conducted. TETS with the aid of clickers was used in the manner that accommodates students' diversity in learning and accommodate the individual student learning needs. CCA 1 consisted of five questions testing the knowledge of the application of differentiation, application of integration, and optimisation. CCA 2 and 3 consisted of five questions. Figure 1 is the illustration of CCA from each assessment.

**Figure 1**: Example of CCA 1, 2 and 3.

### Survey Questionnaire

A survey questionnaire was administered. This questionnaire comprised of three Sections. Section A consisted of biographical data such as age, gender and registration. Section B, comprised of 15 questions on students' perspectives on the integration of TETS with the aid of clickers. Here, 15 - item scale which covered areas relating to teaching and learning, assessment for learning using clicker technology as well as students' perspectives on the use of clickers in teaching and learning. Students were asked to indicate their responses on a 5-point Likert-type rating scale anchored by 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree. About teaching and learning, the aim was to establish how TETS with the aid of clickers were used in-class. For example, students had to rate the items – Using clickers help me to pay more attention in class. The aim of assessment for learning was to gather students' views about the use of clicker technology. For example, students had to rate the items: When responding to questions by using clickers, I analysed the question and worked out the problem using correct mathematical principles/formula/rules. The last section aimed at gathering students' views about the use of clicker technology in teaching and learning. For example, students had to rate the items: We should continuously use clickers in class. Section C comprises of three open-ended questions about the implementation of clickers. The aim was to gather students' views with the integration of TETS using clickers in

a qualitative sense. In this case, students had to respond to questions such as: In your view, what was the impact of the use of clickers in Mathematics? and, describe your experiences of using clicker technology in class.

## ISSUES OF TRUSTWORTHINESS

In terms of the validity of the instrument, objectivity, and credibility (which are an integral part of trustworthiness) were assured through the researcher consulting colleagues and mathematics lecturer at a study university. The object of that exercise was to ascertain whether the instrument could be judged to be objective and credible. That is, the colleagues and the lecturer determined whether it measured what it was designed to measure. In this regard, the colleagues and the lecturer felt that the instrument was objective and credible thus assuring trustworthiness.

In terms of the quantitative (15 - item scale), reliability (alpha) measured through internal consistency of scores was: $\alpha = .818$. Content validity was assured by the colleagues and the mathematics lecturer at the study university indicating that they thought the instrument was measuring issues relating to teaching and learning using clicker technology, assessment for learning and students' perceptions about the use of clickers.

## RESULTS

### Clicker Continuous Assessments

Three CCAs were conducted. Table 1 shows the frequency distribution and percentages of the CCAs 1, 2 and 3. In CCA 1, all the students took the test. In total, 140 (73.3) of the students passed the test and 51 (26.7) student failed the test. CCA 2 was written by172 out of 191. The majority of the149 (86.6) students passed this test. CCA 3 was written by 179 out of 191. With the majority of the students passed the test.

**Table 1**: The frequency distribution and percentages of the CCAs 1, 2 and 3.

| Participants | CCT1 | | CCT2 | | CCT3 | |
|---|---|---|---|---|---|---|
| | Pass | Fail | Pass | Fail | Pass | Fail |
| Students | 140 (73.3) | 51 (26.7) | 149 (86.6) | 23 (13.4) | 159 (84.6) | 29 (15.4) |

### Survey questionnaire

Table 2 shows the results in respect of the 15 items for students in terms of the six items relating to *Clickers for Teaching and Learning*. It may be observed from the table that for CTL1, the results shows that slightly less than three in four (74.3%) students indicated that they strongly agreed or agreed that clickers assisted in paying more attention to what was happening in class. For CTL2, the results show that (70.1%) indicated that they felt that clickers assisted them to understand the concepts better. In CTL3, the results revealed that slightly more than three out of four students 75.2% indicated that they strongly agreed or agreed that clickers enabled discussion in the classroom. For CTL4, the results shows that that slightly less than three out of four (74.3%) indicated that they strongly agreed or agreed that clickers increased interactions in the classroom. For CTL5, the results show that the majority of the students(79.5%) felt clickers assisted them in learning. For CTL6, Once more

here, slightly less than three out of four (74.4%) indicated that they strongly agreed or agreed that clickers assisted them in interacting with other students in class.

In terms of the five items relating to *Assessment for Learning*, it may be observed from Table 2 that: the findings indicated that in AL7, students 61.5% agreed and strongly that clickers allowed them to think deeply. In AL8, More than half (53.9%) reported that they did not guess their answers. In AL9, the findings shows that the majority of the students (82.9%) strongly agreed (60.7%) and agreed (22.2%) that they analysed a question and in fact followed correct mathematical principles. In AL10, the results shows that most students (71.8%) indicated that clicker assessment activities motivated them to actively engaged in class. In AL11, the results reveals that 65.8% strongly agreed or agreed that the assessments motivated them to find out more about the subject.

**Table 2:** Frequency distribution and percentages in respect of 15 items for MII – Group D (N = 117)

| Scale item | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|---|---|---|---|---|
| | *Teaching and Learning*: [n (%)] | | | | |
| CTL1 | 59 (50.4) | 28 (23.9) | 18 (15.4) | 8 (6.8) | 4 (3.5) |
| CTL2 | 51 (43.6) | 31 (26.5) | 24 (20.5) | 8 (6.8) | 3 (2.6) |
| CTL3 | 58 (49.6) | 30 (25.6) | 18 (15.4) | 8 (6.8) | 3 (2.6) |
| CTL4 | 47 (40.1) | 40 (34.2) | 23 (19.7) | 7 (6.0) | - |
| CTL5 | 58 (49.6) | 35 (29.9) | 17 (14.5) | 5 (4.3) | 2 (1.7) |
| CTL6 | 52 (44.5) | 35 (29.9) | 17 (14.5) | 10 (8.5) | 3 (2.6) |
| | *Assessment for learning*: [n (%)] | | | | |
| AL7 | 47 (40.1) | 25 (21.4) | 23 (19.7) | 11 (9.4) | 11 (9.4) |
| AL8 | 21 (17.9) | 18 (15.4) | 15 (12.8) | 23 (19.7) | 40 (34.2) |
| AL9 | 71 (60.7) | 26 (22.2) | 9 (7.7) | 6 (5.1) | 5 (4.3) |
| AL10 | 53 (45.3) | 31 (26.5) | 26 (22.2) | 6 (5.1) | 1 (0.9) |
| AL11 | 51 (43.6) | 26 (22.2) | 26 (22.2) | 11 (9.4) | 3 (2.6) |
| | *Students' Perceptions*: [n (%)] | | | | |
| SP12 | 60 (51.3) | 23 (19.7) | 13 (11.1) | 12 (10.3) | 9 (7.6) |
| SP13 | 9 (7.7) | 12 (10.3) | 14 (12.0) | 27 (23.0) | 55 (47.0) |
| SP14 | 53 (45.3) | 39 (33.3) | 13 (11.1) | 7 (6.0) | 5 (4.3) |
| SP15 | 59 (50.4) | 28 (23.9) | 16 (13.7) | 7 (6.0) | 7 (6.0) |

With respect to the four items relating to Students' Perceptions, it may be observed from Table 2 that for SP12, the results shows that the majority (71%) indicated that they liked using clickers in class. For SP13, the result indicated that 47% strongly disagreed and 23.0% disagreed that clickers should not to be used in class. For SP14, shows that the majority (78.6%) strongly agreed or agreed that indeed clickers were effective in the learning process. For SP15, The results shows that most (74.3%) students indicated that they strongly agreed and agreed that clickers should be continuously used.

Section C of the survey questionnaire comprised of three open-ended questions. The results are presented according to each question. Pseudo names are used in presenting the results. In Question 1, students responded to: *Does the assessment feedback enhance or improve your learning*? Students were given the option of answering *Yes* or *No*. Subsequent to their choices, students were asked to explain their answer. In this case, 83 codes were identified

from the primary document. These codes were grouped into 11 themes that relate to the category of assessment feedback. The themes were then clustered into 2 categories. These categories include *enhances learning* and *does not enhance learning*. The first category (*enhances learning*) had eight themes related to *new methods; perform better;* lecturer *gives us feedback; big time; analyse mistakes; feedback makes me understand*; *receiving feedback* and *motivates to work hard*. In theme 1: (*new methods*) students felt that feedback assisted them to learn new innovations which enabled them to deal with problems better. In this regard, Felix who said: 'Yes …, it does enhance my learning and I get to learn *new methods*'. In terms of theme 2: (*perform better*) students indicated that feedback enabled them to identify their mistakes. Invariably, they felt that identifying their mistakes enhanced their learning and so they received better marks. Christian wrote: 'Yes …, because I can rectify my mistakes and *perform better* in class'. The second category (*does not enhance learning.*) had six themes related to *assessments are simple; test and examination questions are difficult; did not do corrections; did not improve; do not focus* and *too much to handle.* About theme 2: (*tests and examinations are difficult*) students felt that tests on individual concepts were easier than when a number of concepts were tested. David indicated: 'No …, assessments done in class are about simple concepts when compared to *test and examination* questions'.

In Question 2, students were asked: *In your perception, what was the impact of clickers use on your learning of Mathematics?* Here, 146 codes from the three primary documents were identified. These codes were grouped into 19 themes. In this case, three categories emerged. The categories were named *good impact*, *I do not know* and *no impact*. The first category (*good impact*) included fourteen themes related to *clickers enhanced thinking; easy to understand; clickers encourage participation; engagement was easy; solve problems fast; finish on time; use modern technology; clickers enhanced learning; clickers being a new learning method; clicker tests; clicker test results received immediately; clickers are good; clickers motivate and clickers lead to mastering the subject*. In terms of theme 1: (*clickers enhance thinking*) students indicated that clickers influenced them on thinking about concepts. Petros wrote: 'It enhanced my *thinking* and learning because the questions were multiple choice so I had to make sure I do everything right, so as to get the correct answer'. About theme 2: (*easy to understand*) the students reported that the use of clickers made it easier for them to know what was going on in class. In this regard students' statements had the word *understand(ing).* Lwandle argued that: 'After clicker test I get my results immediately so it is *easy to* see if I *understand* or not'. Regarding theme 3: (*clickers encourage participation*) students indicated that clickers allowed them to be involved in class. Nomvuyo indicated: '*Clickers* are good as they *encourage* students to *participate* and enjoy the subject'. In theme 4: (*engagement was easy*) students indicated that clickers encouraged interaction in class. Marius wrote: 'Clickers made us *engaged* in class'.

The second category (*I do not know*) included two themes related to: *did not participate in clicker tests* and *missed clicker periods.* In terms of theme 1: (*did not participate in clicker test*) students revealed that they did not take any of the clicker tests. Pontso wrote: '*I did not write* the *clicker tests*'. In theme 2: (*missed clicker periods*) students indicated that they were absent during the clicker tests when she pointed out that: 'No …, comment. Because I *missed clicker periods*'.

The third category (*no impact*) included seven themes related to *bad; no time to work out the answer; lost focus; guess answers; sometimes confused; technical problems;* and *limited time*. In theme 1: (*bad, no time to work out the answer*), students indicated that they felt awful

in using clickers because of the limited time that was allocated. Selby pointed out that: 'The impact was *bad* ... because I did *not* have *time to* think and *work out answers*'. About theme 2: (*lost focus*) students felt that they failed to concentrate during the clicker use in class. Shepard said: 'I did not *focus* well, I feel *lost* during clicker test'. In terms of theme 4: (*sometimes confused*) students felt they got puzzled along the process of using clickers. Rebecca wrote: 'It *sometimes confuses* me'. Regarding theme 7: (*chaos*) students viewed the classroom discussion, interaction and participation as a cause for disordered in class. Paul pointed out that 'Clickers made a class like a park as noise turned it into *chaos*'.

In Question 3, students were requested to describe their experiences of using clicker technology. Here, two categories emerged. These categories were named *good experience* and *bad experience*. Figure 2 show the network of students' experience of using clickers' technology in class The first category (*good experience*) included fifteen themes related to *new experience, good experience; simple to use; engagement in class; confidence in the subject; fast thinking; using technology motivates; manage time; immediate results; writing tests using technology; see the memorandum; multiple-choice questions save money; accommodate slow learners; and reduce work for the lecturer*.

**Figure 2**: The network of students' experience of using clickers' technology in teaching and learning

About theme 3: (*engagement in class*) students indicated that clicker technology encouraged engagement in class. Thando wrote: 'I *interact* more with the people I am sitting next to. I am now *engaged* in technological aspects'. In theme 4: (*confidence in the subject*) students were confidence in solving mathematical problems using clickers. Thandeka intimated that: 'I enjoy using clicker technology; it helps me to develop *confidence in the subject*'. With regard to theme 7: (*manage time*) clickers taught students to be on time when working out the problems. Nelly said: 'To *manage the time* that we are given for a specific question'. In terms of theme 8: (*immediate results*) students indicated that clickers provided quick results. Patrick indicated: 'I like the fact that you *immediately* get your *results*'. In terms of theme 13: (*slow learners*) students revealed that when clickers were used, they accommodated all the students particularly the slow learners. Tshidi said: 'I am a *slow thinker* so I just want us not to have a time limit in giving answer'.

The second category (*bad experience*) included seven themes related to *worried about the answer; confused by answers*; *guess work; not recommended for the student; disgusting; easy to fail* and *difficult at first*. In terms of theme 1: (*worried about the answer*) students felt worried because they were not sure whether they clicked the right answer. Lwazi said: 'I was *worried* on whether I passed on the right *answer* or not'. In theme 2: (*confused by answers*) student got confused when their answers they worked out on paper were not on the options provided. Nandipha wrote: 'It was my first time, but sometimes I was *confused* to what answer to click on'.

## DISCUSSION

In this study that a flipped learning approach was adopted in order to engage students in the mathematics class. The aim was to alleviate the challenges stated in literature to improve student learning and programme improvement (O'Flaherty & Phillips, 2015). So, in this study the mathematics lecturers covering the Mathematics II syllabus were recorded and uploaded to the learning management system (LMS) as well as on YouTube for students to easily access. It is stated that today, videos have found a special place in the heart of the students in the 21st century (Simelane-Mnisi & Mji, 2015). Furthermore, the learning material on the application of differentiation, application of integration, and optimisation were also made available on the LMS in form of lecturer notes. This was accomplished in order to ensure that students study the content before coming to class. If may be argued that in the flipped mathematics course the asynchronous, technology network-based learning and student-centre approach were adopted. Students were expected to engage with the learning material outside the class. The learning content was accompanied by short learning activities to ensure that students engage with the material. In this regard, students learned to apply the critical thinking skills, communication as well as solving problems on their own. It may be argued that these activities gave students the opportunity to interact, engage and participate with activities contributed to their improved chances of success and citizens needed in the 21st century learning.

In order to ensure that students engaged with the learning material out of the class, in-class clickers were used to test students' knowledge understanding and application of the recorded lecturers. The lecturer adopted teach by question approach and promoted live interaction. Because this was a large group of students the lecturer had to ensure that all the students participate and engage in the teaching and learning process. In this case, all the students received clickers. It may be observed that results of the weekly CCAs were monitored in order to ensure track student progress. It is observed from the results that there was an improvement in students' academic performance, It may be argued that there was an improvement in students improvement on the concepts tested in CCA1 73.3%, CCA2 86.6% and CCA3 84.6% of the students passed the tests though there was a decline of 2% in CCA3.

With respect to teaching and learning, students felt that clickers assisted them in paying more attention to what was happening in class. Also, they indicated that clickers allowed for increased interactions. Students' responses here are consistent with the view that when clickers are used in class; students pay attention to the posed question and respond favourably to these (Lockard & Metcalf, 2014). Where clickers have been used in mathematics, it has been found that students thought that they were enjoyable because engagement was encouraged throughout (Stewart & Stewart, 2013). Enjoyment in learning is seen as critical because it is argued, students tend to understand and remember teaching material better which could improve the levels of academic performance (Kulatunga & Rameezdeen, 2013).

Regarding assessment for learning, students felt that clickers allowed them to think deeply about problems. What is important about deep thinking is that it invariably means that students do not guess their answers. What the students reported is consistent with literature that has shown that clickers have the potential to stimulate deep thinking and allow individuals to tap on prior knowledge (Stewart & Stewart, 2013). In fact, researchers e.g., Lockard and Metcalf (2014) say that clicker usage tends to enhance students' mathematical communication skills, and help to develop the skills needed to write as well as read mathematical proofs (Lockard & Metcalf, 2014). This suggests that clicker assessment activities have the ability to assist students to grasp the content and enabled them to apply it in practical situations (Simelane & Dimpe, 2011). An advantage here is that students who understand mathematical content are neither likely to guess nor memorise the subject but will strive to understand it (Simelane, Mji & Mwambakana, 2011).

With respect to perceptions about clickers students indicated that they liked using clickers. They indicated that the utility of clickers was in the fact that they provided immediate feedback. They felt that immediate feedback helped them to improve the understanding of concepts as well as identify their mistakes. These perceptions are consistent with the reported trend in literature that students who liked clickers found them to be fun, interesting and enjoyable (Brouhle, 2011; Quinn, 2010, Educause Learning Initiative, 2005).

## CONCLUSION

In conclusion, it may be observed in this study how the flipped classroom approach was used to engage students in the mathematics course. It may be concluded that video clips were aimed at a specific knowledge point. These videos were created by the lecturers teaching the subject these videos were homemade videos as supported by (Herreid & Schiller, 2013).These videos were supplemented with learning activities that ensured that student engaged with the learning material on their own. This was done in order to improve student learning. In-class it may be observed how TETS with the aid of clickers was used in order to promote interaction, engagement and improve academic performance. In this study we also observed how immediate feedback assisted students to improve their understanding of concepts and identify their mistakes.

## RECOMMENDATIONS

It is crucial that lectures adopt the flipped classroom approach in their teaching in order to adopt the student-centered approach to learning. It is recommended that lecturers when adopting flipped learning approach the recorded videos are short and straight to the point. These videos should be tied with activities that will forster students to engage with the learning content. It is recommended that in-class lecturers use the technologies that will give equal opportunity to all the students in class. This will allow the shy students to also participate in class.

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# ANALYSING TEACHERS' UNDERSTANDING OF THE CURRICULUM AND ASSESSMENT POLICY STATEMENTS IN SELECTED PRIMARY SCHOOLS IN THE GAUTENG PROVINCE

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## ABSTRACT
The aim of the research was to analyse teachers' understanding of the Curriculum and Assessment Policy Statements (CAPS). This research was underpinned by both constructivist and critical theories. Teachers will have to use their experiences to expose learners to activities that allow them to attach different meanings to the social reality. Another central concept in constructivist thinking is that knowledge is not fixed. It is shaped, constructed and reconstructed in different social contexts and at different times. It involved an analysis of the merits and demerits of teachers' understanding of the CAPS in selected primary schools in the Gauteng Province of the Republic of South Africa. Qualitative research assisted the researcher to evaluate how teachers understand the CAPS. Teachers' understanding of CAPS was gauged against the background of the National Curriculum Statement (NCS). Data were analysed by selecting, comparing, synthesising and interpreting information to provide explanation. Data collected were compared against each other and consolidated into a meaningful discussion. It has been established in this research that teachers received training on the CAPS. The findings revealed that the facilitators of the workshops were sufficiently competent. It is therefore necessary to find appropriate professional development approaches to ensure that all teachers, even the most experienced ones, are equipped with the necessary knowledge and skills for improving learner performance. Teachers should thus be given the opportunity to give their own opinions on professional development programmes.

**Keywords:** Constructivist, curriculum and policy statements, primary schools, teachers.

## INTRODUCTION
Over the past few many western democracies over the past few decades has gone educational reform. This dilemma was also experienced I South African education in during the post-apartheid with the transformation of the school curriculum. Hoadley and Jansen (2014) point out that: "In 2000, the Education Ministry announced a review of Curriculum 2005 (C2005). The review team's first report was interpreted as suggesting a move away from a radically integrated, real-world based curriculum towards one in which the subject content was re-emphasized. Curriculum Statements, informed by the review committee's recommendations, were then written. The National Curriculum Statement became the official curriculum in 2006".

The Department of Basic Education (2011) states that the National Curriculum Statement (NCS) was amended and replaced by the Curriculum and Assessment Policy Statements (CAPS), and the implementation dates were as follows: Grades R-3 and 10 in 2012, grades 4-6 and 11 in 2013, and grades 7-9 and grade 12 in 2014.

According to Beets (2011) the replaced syllabi provided some descriptions of what could be taught in a specific subject (the content) as well as broad intentions regarding the aims and

objectives of teaching and learning. CAPS have also shown remarkable interest with regard to curriculum objectives as it placed focus on topics and specific aims.

As time went on, a need arose to develop CAPS document for every subject that will be the definitive support for all teachers and help address the complexities of the NCS (Department of Education 2009). There has also been considerable criticism of various aspects of its implementation, manifesting in teacher overload, confusion and stress and widespread learner underperformance (Department of Basic Education, 2009). As part of a solution to the above criticisms, CAPS came to replace assessment standards with topics.

A National CAPS is a single, comprehensive and concise policy document, which replaced NCS, grades R-12 (Department of Basic Education 2011). This curriculum came after the Department of Basic Education had appointed the panel of experts to investigate the nature of current challenges and to replace the NCS. The Department of Basic Education informed the parents, teachers, and other stakeholders of the progress made on the review of NCS as announced by the Minister of Basic Education, Angie Motshekga, on 06 July 2010. This curriculum was aimed at replacing the NCS in order to improve the quality of teaching and learning.

The aim of this research also lies on the fact that the majority of stakeholders are not yet confident about CAPS implementation as it is presently at its new stage. Teachers' experiences have to be Africa – *apartheid curriculum, Curriculum 2005, Revised National Curriculum (RNCS) and National Curriculum Statement* (Hoadley & Jansen 2014). Currently there is CAPS which is already been implemented in grades R-12. Everybody is interested in the ideologies that underlie this curriculum and what its implications are for different groups of learners.

## THEORETICAL FRAMEWORKS

This research was underpinned by both constructivist and critical theories. In CAPS, teachers need to allow learners to socially construct meanings in the classroom through interaction. Audi (in Donald 2008) argues that in education the idea of learning as a constructive process is widely accepted: learners do not passively receive information, but instead actively construct knowledge as they strive to make sense of their world. Another central concept in constructivist thinking is that knowledge is not fixed. It is shaped, constructed and reconstructed in different social contexts and at different times. In some of the NCS's documents, there is also an enduring emphasis on learner construction of knowledge, notably in the Life Sciences (Umalusi as cited in the Department of Education 2009), and the same applies to CAPS. Teachers will have to use their experiences to expose learners to activities that allow them to attach different meanings to the social reality.

Vygotsky (cited in Donald 2008) points out that knowledge itself is not absolute and unchanging. It is a social construction that is developed and learned through social interaction. Ornstein (2012) reflects that most of the constructivists favor an activity-centered curriculum in which learners interact with knowledge and each other to construct meaning and new knowledge for themselves. For example, learners may be given a practical task in which they are required to read and follow instructions, make observations and conclusions. In this way learners develop confidence and attain problem solving skills.

Booyse (2011) states that the key focus areas in the philosophy of critical theory are the 'change and emancipation' of societies from being indoctrinated towards being critical and questioning. As for Paulo Freire (cited in Lemmer 2000:57), the essence of education about society is that social reality is made by people and can be changed by people. It is important that both learners and teachers see that social and political reality is not fixed, but that it can be changed and transformed. This is because most of the curricula facing most teachers and young people in the developing countries are handed down for implementation without any room for critiquing.

Department of Education (1997) acknowledges that through critical theory, learners learn the skills to "collect, analyze, organize and critically evaluate information". The emphasis on reconstruction and on critical and questioning attitudes in the new curriculum reflects the key aspects of the philosophy of critical theory. Critical theory raises questions of consciousness when dealing with knowledge. Critical dialogue about educational issues that affect the society is encouraged. Learners should be given tasks that force them to be in dialogue with themselves and nature. Once learners start doing so, teachers can now say that CAPS has been mastered.

## RESEARCH DESIGN AND METHODS

De Vos, Strydom and Fouche (2011) state that qualitative research methods elicit participants' accounts of meaning, experience or perceptions by producing descriptive data in the participants' own spoken words. Qualitative research is typically used to answer questions about the complex nature of phenomenon, often with a purpose of describing and understanding the phenomenon from the participants' point of view (Leedy & Ormrod, 2012). Qualitative research was chosen to assist the researcher evaluate how teachers understand the CAPS. The advantage of this approach is that it provides rich descriptive data as observed by the researcher during the interactions with participants. It served as the principal method of investigation. This method also enabled the researcher to capture different experiences of the participants accurately. Qualitative method relies heavily on the meanings of communicated information and not on quantity as indicated through statistics. This method contributed to answering the research questions (those asked participants) which are informed by the main research question enabling critical theory which examined the spoken and written words in detail.

Hofstee (2013) reflects that in the research design one does not have to explain the details of how to implement the techniques, but only discuss the technique/s that will be used. Qualitative research assisted the researcher to evaluate how teachers understand the CAPS. Teachers who are currently teaching in the Intermediate Phase were interviewed. Teachers' understanding of CAPS was gauged against the background of the NCS. Their noticeable experience of the NCS and accessibility has contributed to them being selected / sampled. Respondents were interviewed separately on individual basis. This study was conducted in five different schools and this created room for multiple/diverse ideas.

A complete coverage of the whole population is seldom possible. The sampled schools have ±20 teachers and the learner enrollment of about 600. Twenty participants were central to the research. Interviews were conducted and respondents were tape-recorded and data transcribed.

Firstly a letter requesting permission to conduct investigation was forwarded to the five schools that were part this study. The letter informed the teachers of their right to privacy, anonymity and protection from harm. De Voss (2011) recommends that subjects who are tape recorded should give their consent, and confidentiality must be ensured.

**Data Collection**

According to Voce (2013), the primary methods of data collection in qualitative research are observation, interviews and focus group discussion. Data collection is simply how information is gathered. In-depth formal interviewing was used as the main data collection method. Other data collecting techniques, such as observation and informal conversations were used to supplement data collected through interviews. Data were also collected through observing and describing the experiences of the participants. The literature review informed the researcher about the topic. The researcher interacted with the participants in order to get the most reliable information. To avoid manipulation, the researcher gave the participants equal opportunities to participate in the investigation. The researcher used focus group interviews and individual interviews to collect data. Follow-up sessions were appropriate in the form of structured and unstructured interviews.

According to Denscombe (2013), focus group interviews provide an opportunity for individuals with common or divergent backgrounds to explore a problem. Focus group interviewing is a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive non-threatening environment (Krueger, 1994). Focus group interview relies on the interaction among group members to elicit more points of view as group members influence each other by responding to ideas and comments in discussions (Mertens, 2012). This data collection method is actually an open group discussion. The format of this type of group interview is not that of question and answer. The researcher encourages respondents to use their own terminology in describing their experiences. The reason for this is to allow the data to truly emerge from the respondents.

The main data collection method was interviews. Supplementary methods of data collection such as videotapes, audiotapes and diary notes were used. Interviewing provided room for face to face interaction and clarification of concepts that might be confusing to the participants. Collection of data from fewer participants is the best choice for virtually any qualitative data. The interviews were audio-taped in a cassette and transcribed.

In trying to avoid biases and maintain validity and reliability of data, a process of triangulation was administered. De Vos (2011) defines validity as referring to the degree to which an instrument is doing what it is intended to do. Validity was maintained by choosing the sample that is accessible. This saved time and costs during interviewing process. Reliability is primarily concerned not with what is being measured but with how well is it being measured.

**Data analysis and interpretation**

According to Michelle (2012), qualitative data analysis consists of identifying, coding and categorising patterns found in the data. Bradley (2011) declares that once the data have been reviewed and there is a general understanding of the scope and contexts of the key experiences under study, coding provides the analyst with a formal system to organise data, uncovering and documenting additional links within and between concepts and experiences

described in the data. Plooy (2012) defines data analysis as a process of bringing order and structure to the mass of collected data. Discourse analysis usually uses tapes so they can be played and replayed for several people discussing, not individual person specifically. Data analysis and interpretation involved the analysis and interpretation of documents related to CAPS. Data were analysed by selecting, comparing, synthesising and interpreting information to provide explanation.

According to Creswell (2012), in qualitative research data analysis is conducted simultaneously with data collection, data interpretation and narrative reporting. Bogdan and Biklen (2010) define qualitative data analysis as "working with data, organising it, and breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned and deciding what will tell others". Strauss and Corbin (2012) contend that the bits of data from the participants provide the researcher with this "big picture" that transcends any one single bit of data. In this study the researcher analysed and interpreted the "big picture" from what the participants said and how individual statements related to what the "big picture" stands for. The researcher used the inductive approach to ensure that the research findings emerge from the frequent, dominant or significant themes inherent in raw data generated.

Data analysis and interpretation was done after data collection. Data were sorted accordingly, conceptualized, refined and organized into a coherent new structure. The audio-taped interviews were transcribed, then analyzed. Contradictory points of view and new insights were revised and refined. Data collected were compared against each other and consolidated into a meaningful discussion. It was necessary for the researcher to maintain trust and confidentiality when analyzing data.

## FINDINGS AND DISCUSSIONS

The main issue investigated was the teachers' views about Curriculum and Assessment Policy Statement (CAPS). In order to get more information about the teachers' knowledge of CAPS, the following questions were asked:

**"First I would like to know your views on Curriculum and Assessment Policy Statement".**

In their responses sixteen (16) teachers indicated that they were more comfortable with CAPS. This was confirmed by Teacher P, who said, *"The facilitators were well prepared". This was supported by teacher I who said, "CAPS is good. The number of subjects has been reduced and what you must teach the learners is clearly stipulated".*

**"How would you rate your understanding of Curriculum and Assessment Policy Statement?"**

Twenty (20) teachers who were interviewed concurred that they understand CAPS and were confident that they would be able to implement it in their classrooms. A few of the verbatim responses are indicated below:

*Teacher S, "CAPS is better. We are given the content to teach our learners. Knowledge, skills and values are clearly stipulated. It is for the teacher to decide when to teach a*

*particular skill to his learners. The work programme is also clearly stipulated according to the terms of the year".*

*Teacher J, "The content is well stipulated and there are no learning outcomes and assessment standards that used to confuse us. The learning outcomes and assessment standards were so many and we could not memorise them. We were expected to identify the content in the assessment standards and that was not easy. Now we have the content given to us and we must just decide how to teach".*

*Teacher F, "CAPS is clear and better when compared to the previous policies. We thank the Department of Education for streamlining the National Curriculum Statement".*

**"What training did you receive in respect of Curriculum and Assessment Policy Statement?"**

Twenty (20) teachers indicated that they attended a three day workshop organised by the Department of Education. Some of the responses from the teachers are indicated below:

*Teacher K, "We attended a workshop for three days during school holidays. However, the period of training was not enough. We expected the Department of Education to train us for a longer period than they did with the National Curriculum Statement".*

*Teacher G, "The Department of Education called us for a workshop where we were taken through the implementation of CAPS. The three days were not adequate taking into account that the previous curricula were difficult for us to implement because we were not trained for a long time. They always repeat the same mistake when coming to the period of trainings we hope that the Department of Education will call us for more training so that we can implement this curriculum appropriately."*

*Teacher N, "Our district office organised a workshop for CAPS and we were invited to attend". We attended the workshop for three days only. This is not adequate. They must also invite the principals to attend these workshops. The principals do not attend these workshops but they expect us to implement what they don't know."*

**"What are your views when you compare the Curriculum and Assessment Policy Statement, the Revised National Curriculum Statement, the National Curriculum Statement and Curriculum 2005?"**

All teachers who were interviewed indicated that CAPS is better than C2005, RNCS and NCS. A few of the verbatim responses are indicated below:

*Teacher C, "CAPS is better than the previous policies on teaching and learning".*

*Teacher P, "Some aspects such as assessment standards that use to confuse us have been excluded in CAPS".*

*Teacher H, "CAPS is not complicated and we are given the content to teach the learners".*

**Can you please clarify the instructional time for all subjects in the Intermediate Phase?**

All teachers who participated in this study indicated that they did not know but they always refer to the policy documents as such times are clearly stipulated.

**What are the skills that the learners must acquire in English as First Additional Language?**

Teachers who participated in this study mentioned skills such as listening and speaking, reading and viewing as well as writing and language structure. Teacher F said, *"Learners will use listening and speaking skills in order to interact with one another".* Another teacher said, *"Reading is very important because learners will read and write in other subjects. We use group reading, independent reading or pair reading".* However, teachers could not clearly explain the process of reading such as pre-reading, reading and post-reading.

One teacher said, *"Writing is an important skill because learners think about grammar and spelling".* However, when asked about the process approach to writing, all teachers who participated in this study could not clearly explain.

**My you please mention some language teaching approaches in Curriculum and Assessment Policy Statement?**

Teachers mentioned approaches such as text-based and communicative but could not clearly explain the processes of such approaches. They indicated that they refer in the policy documents for the approaches as well as time allocation for each skill in the various subjects.

**May you please identify the content for listening and speaking skills?**

Teachers mentioned content such as listening comprehension, conversation, directions and instructions, retelling stories, story-telling, role-play, group discussions, short talks, short poems and rhymes and language games.

**What do you understand by reading and viewing skills?**

Reading form their policy documents, below are some of the verbatim responses from the teachers who participated in this study:

"Stories, for example, contemporary realistic fiction, traditional stories, adventure stories, science fiction, biographies, historical fiction, plays and poetry".

"Information texts such as procedures, factual recounts, general knowledge texts and informative texts such as reports social texts like invitations, greeting cards, letters and notices".

*"Media texts, for example, advertisements, newspaper reports, magazine articles, notices and pamphlets".*

*"Visual literacy such as posters, pamphlets, advertisements, notices, drawings, photographs, cartoons, comic strips, diagrams, graphs, tables and charts".*

*"Types of reading are close reading of texts like comprehension activities, making summaries, etc. Extended reading of texts such as oral discussions, book reviews and projects, prepared and unprepared reading aloud".*

**What do you understand by writing and presenting skills?**

Reading form their policy documents, teachers who participated in this study mentioned content such as word writing, sentence writing, paragraph writing, creative writing, descriptive, such as descriptions of people, places, animals, plants and objects, narrative such as stories, personal recounts, diaries diary and autobiography. Imaginative such as short

poems. Dialogues and short play scripts based on stories. Transactional writing such as social media and information texts. Furthermore, teachers mentioned content such as notes, messages, letters, greeting cards, invitations, posters, notices, brochures and advertisements. Short written speeches, procedural texts, factual recounts such as news reports, reports of procedures and reports of phenomena observed. Teachers further mentioned content like information texts such as texts for other subjects, informative texts, books or story reviews. Teachers also mentioned visual literacy texts such as tables, charts, mind maps, diagrams, drawings and graphs.

**What do you understand by language structures?**

Teachers mentioned content such as nouns, determiners, pronouns, adjectives, verbs, adverbs, connecting words, tenses, modals, sentence structures, punctuations, vocabulary development, spelling and spelling rules.

## CONCLUSIONS

The research findings of this article indicated that teachers received training on the CAPS. The time frames in which teachers were trained were not adequate. The research found that the only intervention strategy to assist teachers in implementing teaching and learning policies was in the form of workshops. This research further indicated that the facilitators of the workshops were sufficiently competent.

## RECOMMENDATIONS

The need for high quality professional development is imperative for improving quality education in South African schools. It is therefore necessary to find appropriate professional development approaches to ensure that all teachers, even the most experienced ones, are equipped with the necessary knowledge and skills for improving learner performance. Teachers are the key actors in continuing professional development and should be involved in the decisions made by the authorities. Teachers should thus be given the opportunity to give their own opinions on professional development programmes.

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# COMMUNITY RADIO AND LEARNER SUPPORT IN SOUTH AFRICA: BRIDGING THE EDUCATIONAL GAP BETWEEN URBAN AND POOR RURAL HIGH SCHOOLS

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**Abstract**
This paper explores the prospects of community radio programming as a mitigation strategy towards delivery of innovative supplementary instruction to learners in the poor rural high schools of South Africa. This is in view of the fact that most rural schools do not perform well in their annual matric examinations, particularly in technology inclined subjects when compared with their counterparts in the urban centres. This poor performance has been attributed to various factors such as; lack of access to appropriate technologies to support innovative and creative learning in rural areas, poverty, shortage of skilled teachers, inadequate text books, and non-availability of internet access in most rural schools. Despite government's effort in supporting educational development in rural schools, research findings show that the educational gap between the two settings continues unabated. This happens in a multimedia environment characterised by a virtuous community broadcast technology that boasts at least 204 radio stations across the length and breadth of the country, a majority of which are based in the rural setting. This work explains how a developmental community radio programming could be adopted as a low cost broadcast technology to facilitate or complement the existing learners' support to improve their academic performance in rural schools. Community development approach was used to expound the utilities of community radio in the delivery of integrated education to learners in the developing world. The paper recommends collaborative stakeholder partnership among the provincial Department of Education, relevant structures within civic society, and the community radio sector in order to bridge the educational gap between urban learners and those in the rural high schools.

**Keywords**: Learner support, community radio programming, mitigation strategy, community broadcast technology

## 1. INTRODUCTION

In South Africa, poor educational attainment has been a subject of debate both in the apartheid and post-apartheid eras. Although most scholars have attributed this to the neglect of African schools owing to the apartheid policies, this trend has since continued unabated more than two decades under the new democratic government post 1994 (Potter & Naidoo, 2012). Notwithstanding the magnitude of the problem at the national level, learners in the rural settings bear the brunt of a failing educational system with more complex and dismal consequences. This is often attributable to lack of relevant adequate educational resources or learner support services. Notably, rural provinces such as the Eastern Cape, Limpopo and KwaZulu-Natal particularly serve as symptomatic sites and reference points in this regard (Gardiner, 2008). Poor *performance* in these areas impacts on the overall performance rating of the country because a majority of the underperforming learners are based in rural schools. The trend has largely contributed to increased rural-urban learner migration where the latter hope to acquire quality education in better resourced schools (Gardiner, 2008), a situation that may lead to over-crowding and consequent poor standards in urban schools. This

demonstrates that educational inequality between urban and rural learners remains a challenge with gross socio-economic implications for society at large.

Following the poor performance, and consequent decline in matric pass rates especially in technology inclined subjects in the recent past (including 2015), South Africa is increasingly facing the challenge of meeting its millennium development targets of providing quality basic education to all its citizens. This is particularly worrisome since there are a majority of under-resourced rural schools where teachers have "very little tangible support either in the form of educational materials or in the form of practical guidance from the educational authorities" (Potter & Naidoo, 2012). In essence, numerous challenges on learner support still beset the system including lack of emphasis on the teaching of literacy, numeracy, lack of teaching materials such as textbooks, workbooks, libraries, and other resources such as the internet (Gardiner, 2008). This has been compounded by lack of in-service training of teachers, let alone the abrupt approach to curricula change and implementation challenges.

Essentially, the above impediments to the acquisition of quality education have necessitated the probe into finding alternative methods of instructional delivery in the South African education system. This is in cognisance of the fact that conventional means of educational delivery systems, especially classroom-based lessons, have proved grossly inadequate to meet international education standards. For this reason, other strategies for educational development have been explored, particularly low-end technologies such as the radio (Potter & Naidoo, 2006). The use of multichannel approaches was adopted particularly in the 1990s and it included Interactive Radio Instruction (IRI) on the basis of its ability to provide low cost support to both learners and teachers. Despite the latter's considerable initial successes, most of these projects were rendered unsustainable due to lack of funding in the face of limited materials and high human resource attrition (Bosch, 1997). IRI's limited success and other forms of radio interventions were arguably attributable to the fact that they were "based upon conventional broadcast wisdom of avoiding 'niche broadcasts' especially of an educational variety (Naidoo, 2002).

Notably, many developing countries including South Africa have not fully conceived community radio stations as technology centres that have the ability to extend access to education to their stakeholder communities (Megwa, 2007). As a result, it is no wonder that there is limited systematic investigation into the mitigatory relevance of community radio in expediting technological access and educational instruction to disadvantaged communities. This paper argues that community radio can make critical contributions to not only expand the social development agenda, but may also extend technology uptake to poor rural communities. Hence, the study explores how community radio broadcasts can serve as catalyst technology in enhancing the educational performance of learners in poor rural high schools of South Africa.

## *2*. COMMUNITY DEVELOPMENT PRACTICE

### 2.1 *Community development theory*

Community development theory has generally been predicated on theoretical propositions that maintain that people have the right to participate in decisions which have an effect upon their well-being (Cook, 1994:14). The theory advances an orientation toward community systems and human interactions considered to be relevant in and for a particular type of social organisation. While it does not purport to give answers to the basic questions of what, why,

or how this should happen for every community system, it does provide a conceptual platform or grounding for the building of a community setting by which to guide and assess appropriate interventions in each particular system (Cook, 1994:10). In the context of community broadcasting, the practice is contrary to the corporate and public stations model which thrives on audience-building based on content that focuses on dominant groups' discourses (Hermens & Emke, 2011). It also places change in both the context of individuals and the larger context of social structures. In this context, development communications is seen as a process that must involve both the transmission of messages about development issues, and empowerment of the disadvantaged to have a greater control of their social, political and economic institutions. In this view, community radio acts both as a catalyst for and a facilitator of change for communities to participate in reconstruction, development and democratic processes.

### 2.2 *Participatory communication model*

The broad nature and lack of audience segmentation to selectively target local communities with tailored messages remains one of the major limitations of mainstream media approaches. Community media initiatives in the recent past have led to a re-assertion of this view with an increasing amount of information being broadcast locally (Hermens et al., 2011). This provides opportunities for programmes to be targeted at specific population groups at the community level and has enabled a two-way communication process that allows for community participation and prompt feedback to programmers. The growing number of these community media initiatives is characterised by broadcasts in a wide range of languages targeted at all age groups including young people. The approach encourages direct participation of local people in the production and dissemination of programmes about community issues, a feature that bolsters the relevance of community radio.

Participatory approaches are designed to work bottom-up, from the community level as opposed to theory-based approaches which use external explanations to initiate change in society. The model advocates for the promotion of media development towards the direct and active participation of communities in narrow-casting formats such as talk shows and phone-in programmes (Muswede, 2009). This incorporates local communities by laying emphasis on the local sub-cultures as well as horizontal interactions more than the dominant mainstream media. In respect of community radio, this relates to the conscietisation and empowerment to enable communities to gain an understanding of their situation and to develop the ability to change their circumstances. Currently, the South African community radio sector uses the internet, telephone and cell phones to support their use of radio technology. Most community radio stations have access to new media, which they use to access news, electronic mail and music data-bases as part of the digital universal service and access to ICTs (ibid).

## 3. UTILITIES OF COMMUNITY RADIO IN SOUTH AFRICA

This section is based on the nature and programming attributes that explain the relevance and potential benefits of community radio in relation to the broader regulatory and operational context within which it functions in South Africa.

### 3.1 *Background and operational context*

In South Africa, community radio belongs to the third tier of broadcast radio alongside the other two categories namely, public and commercial radio. The former are run as parastatals funded partially through government subsidies whereas the latter are operated for profit.

After 1994, community radio emerged as a tool to empower the disadvantaged majority of South Africans with a deliberate shift "from resistance to reconstruction and development at the local level" (Megwa, 2007). Since then, the sector has served as part of the broader platform for the democratisation of media access especially among poor rural communities. It operates on a smaller-scale and focuses mainly on issues affecting their local geographic footprint. They are expected to pursue a social development agenda that is responsive to the express needs and priorities of stakeholder communities (ibid).

Recent studies show that there are at least 204 community radio station licensees boasting a listenership of over 8.3 million across the length and breadth of the country. The sector serves largely poor communities faced with lack of access to ICTs and basic services such as standard health and education. This has made the sector to be recognised as a critical component of grassroots development (Panther, 2014). Therefore, the sector is part of the communication processes that contribute to social change in a manner that facilitates inclusion, participation, and empowerment. The sector encourages its target communities and stakeholders to actively participate in the stations' operations, including the selection and provision of special community programmes. Hence, its relevance to the study relates to its cost efficiency; pertinence to particularly, the illiterate and poor rural communities (Megwa, 2007) through on-air interactive classes enhanced by participatory formats as discussed below.

***Interactive formats***

Community radio's social development agenda responds to its target community needs and priorities through an interactive and consultative process (Panther, 2014. Its programming remains an integral part of the community it serves in order to be an effective means for community relations, education and addressing other community issues. As a two-way communication devise, it requires active participation of both the radio personnel and its audiences in order to add value to the community as a means through which radio staff identify with their listeners. It pays special attention to encouraging messages from listeners through traditional methods such as letters, phone calls, electronic mail, meetings and new media. This provides instant feedback which is absent in other forms of media such as daily publications. As a result, until cheap television production, videophones, and broadband internet are universally accessible, community radio still remains by far the most appropriate medium with immediate feedback for poor rural communities (Muswede, 2009). Community radio's participatory programmes are enhanced by interactivity to satisfy target community needs. With its tradition of local involvement, its content allows for a diverse and interactive programming that gives listeners an opportunity to contribute to the community's developmental needs.

***Language and cultural relevance***

Daral & Aram (2010) argue that "most development actions (for the marginalized and the poor) fail or meet with untimely collapse owing to lack of acknowledgement of local culture" of the local communities. Community radio operates in the general assumption that the people it serves have a shared oral cultural context and individuals benefit from being part of the system of shared beliefs and common purpose (ibid). Community radio stations exist to support and contribute to their communities' social and cultural development. Local languages therefore form a critical aspect of community radio programming. Despite each station having its own specific mandates (Girard, 2007), many stations operationalise their

mandate through a mission statement that describes their goals. Hence, the programming needs of these stations have a special slant towards information that is intended to support the development of community cultural values including multiple languages. Programming content is therefore provided in a way that reflects collective cultural expression of indigenous languages which are often neglected by mainstream and commercial media (Girard, 2007).

***Community participation as social capital***

A clear distinction between the community radio sector and private or public radio is the element of participation by listeners at all levels of the station's operations. This fosters its social capital through inclusion of community members in the board, management and programming structures of the station. Its primary object is to empower those who were previously disempowered to enable them to participate in determining their own destiny through organic systems (Muswede, 2009). The concept of development programming entails the involvement of the people in their own development as reflected in their participation in radio programming, ownership and control. Accordingly, members of the community take the development of the community into their hands by assuming various roles in the running of the station as volunteers, presenters, developers of programme content and other station management responsibilities.

Community radio is seen as an extension of the public space as well as a tool for creating and expanding public participation. It posits to serve target communities as an organic mechanism that ensure that stations become "efficient local knowledge centres" (Jallov, 2005). Through "radio browsing", community broadcasts allow communities to access important web-based information through live to air programmes. This makes community radio to remain a relatively affordable and accessible tool for development and participatory communication, particularly to rural, poor and illiterate communities (Manyozo, 2009; Megwa, 2007). Therefore, community involvement generates social capital that can be tapped into towards the achievement of community needs including provision of supplementary educational support to rural schools.

## 4. BRIDGING THE EDUCATIONAL GAP THROUGH COMMUNITY RADIO ACCESS

The challenge to the provision of a quality education to rural school learners cannot be a singular product of what transpires in the classroom (Beaulieu & Gibbs, 2005), but goes beyond the scope of the school system. Hence, mitigating the educational gap between urban and rural learners through community radio broadcasts lies in innovative programming. While this paper is not prescriptive, its conceptualisation of learner support entails resources that learners need to acquire in order to partake in effective learning. This consists of a range of both human and non-human resources to guide and facilitate the educational transaction (Usun, 2004). Some of the programming initiatives highlighted below need to be adopted as piloted projects to authenticate their effectiveness and sustainability in rural school settings.

- ***Diffusing technological benefits to rural communities***

  This aspect subscribes to the view that, as familiar technology to local audiences, community radio has the potential to facilitate ICTs access and diffuse the benefits of new media to poor rural communities as part of a broader strategy to minimise the digital gap between urban and rural schools. This is in recognition of the need to bridge the digital

disparity in ICT access in poor communities where educational resources are often scarce in comparison to urban centres. The argument stems from linking inherent benefits from the positive manifestations of the new ICTs with community radio networks as a scaffold on the educational outcomes of rural school learners. This integration of community with ICTs has the potential to democratise technology access and create opportunities for marginalised communities. Stakeholder communities have demonstrated "great enthusiasm and expressed tremendous optimism in their radio stations to bring technologies to their door steps" (Megwa, 2007). Thus tailored broadcasts may be delivered for specific schooling needs through a medium that is highly cost effective which learners are comfortable with. Therefore, community radio can build community capacities by integrating internet access, literacy and compliance into cost effective knowledge and technology hubs. Through community-based learner-centred outreach programmes, both remedial and revision lessons can be offered to learners who need extra tutorials and technical assistance. With apt co-ordination through community radio programmers, such lessons can be delivered by local teachers including retirees in the vicinity.

- ***Enhancing teacher and learner enrichment programmes***

Due to the remoteness and budgetary constraints associated with resource-poor schools, teachers and principals operate in "relative isolation from peers or institutional networks and professional development opportunities" (Hannum & Park, 2001). In the absence of such support mechanism, community radio technology comes with the benefits that can provide relevant coping strategies and management skills through capacitation and airing of "need-based" or specific programmes. For example, progressive teachers who have effectively embraced technology-based instruction can be used as change agents for their peers and the local community. This offers access to a network of professionals (including retirees) to share expert knowledge with other educators in disadvantaged rural schools through on-air in-service workshops. As Hannum noted, beyond donating money and teaching materials, the Basic Education Department could facilitate sharing of "teaching staff through a provincial, district or circuit community radio network system. The strategy is commended for using messages in radio to "reinforce the value of basic education and the important role of teachers" by encouraging good classroom teaching and professional behaviour which may be rewarded through merit awards.

Owing to mass media's impact on behavioural change, peer influence could be extended towards shaping learners' personalities through structural delivery of subject content by specific grade "pace setters" to promote positive attitudes and relevant behaviours (Cuc, 2014). The daily radio broadcasts could be used as inspirational mantra to reinforce classroom-based instruction to ensure lifelong learning experiences blended with music, drama, games etc. The strategy may be also useful in enhancing learner participation and engaging their teachers in progressive best practices as a way of affording them a wide range of innovative pedagogical approaches.

- ***Encouraging parental oversight and household investment***

Radio access has the potential to influence household behaviour. This follows scholarly observations that households with greater access to community radio broadcasts are likely to have greater knowledge of government policies relevant to literacy (Keefer & Khemani,

2014). Subsequently, households exposed to more programming on the importance of educating their children are likely to invest more resources including time and money, towards the education of their children. Parents or guardians may offer more homework-based assistance or create a home environment more conducive to learning, a gesture that has the potential to ensure higher aptitudes in learners due to greater exposure to learning materials by parents. This concurs with Hannum et al. (2001), who noted that a "rich home environment for learning… characterised by frequent parent-child interactions and the presence of learning materials" can assist rural learners to engage with learning. This partially addresses the common tendency by society that demands more investment into public education by government as the only solution to improve the quality of education in rural areas.

***Fostering stakeholder partnerships and community involvement***

As a new trend of governance, the mass media can facilitate collective action beginning at the village level to organise demands for school inputs and management of school resources, particularly through Parent Teacher Associations (PTAs) (Keefer et al., 2014). Recent developments also show that, donors now support community radio to promote local collective action to improve the quality of schooling in developing nations. This entails popularising citizen participation in the educational delivery process through design and implementation of programmes that encourage community stakeholder partnerships towards improvement of learner education. Stakeholder involvement may include mobilisation of resources for the school projects such as purchase of school supplies and learning materials including educational technologies. This mobilisation can be used to address poverty/socio-economic challenges that hinder learner performance such as provision of effective transport, nutritious food, counselling, health-care services such as spectacles and warm clothing to help create a conducive environment for learning (Hannun et al., 2001). In certain instances, this could be extended to sponsorship of teaching and learning awards to motivate both teachers and learners in rural schools to excel in their work.

- ***Enhancing government's responsiveness to collective demands***

Through carefully tailored news content, the mass media can potentially influence and promote government accountability by making quality education delivery a politically salient issue (Keefer et al., 2014). In particular, community radio programmes may be used to persuade both private and public actors in rural communities to improve learners' performance. This is possible through local collective action by stakeholders including parents' associations, to pressure government or public employees such as teachers to improve the quality of teaching and learning in rural schools. Through these actions, rural communities that are enlightened on the value of education will have a specific local agency through which they can demand inputs and accompanying action from government to improve learner education. These actions relates to the need for local collective action to demand more responsive service from government officials such as HoDs, managers, and teachers to deliver on the educational mandates of the department.

## 5. CONCLUSION

Community radio can be a major educational communication scaffold to marginalised communities with limited ICT access in rural South Africa. Its interactive formats can be useful in sharing best practices towards fostering integrated teaching and learning programmes designed to offer innovative remedial action to enhance quality education in

under-resourced rural schools. The technology may foster community activeness based on social capital through civic engagement and patterns of mutual support capable of improving the quality of existing educational services. This could complement teacher development or in-service training programmes through integration of teacher and learner support systems. However, this will be possible through collaborative and innovative partnerships among the Department of Basic Education, training systems, civic groups, donor agencies and the community radio sector to develop effective and sustainable community radio interventions that can bolster existing learner support in poor rural high schools.

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# INDIGENOUS KNOWLEDGE: A MEANS TO AN END IN LESOTHO

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## Abstract

Lesotho is a small, mountainous country completely surrounded by South Africa with a population of some two million. It is classified as a low income country, where 70% of the population still live in the rural areas and earn less than $2 a day. Although free primary education was introduced in the year 2000, many boys in particular do not attend school or attend irregularly or drop out early. This is because in Lesotho, culturally, boys are expected to take responsibility for the family livestock. Others, if family circumstances present the need, become hired herders in order to supplement the family income. This means that, unusually for African contexts, more girls than boys attend school. This situation has meant that many boys become adults with little or no formal schooling. Some attend non formal education Non-formal Education (NFE) provision but the indications are that adult male herders often fail to access such provision, either because it does not fully cater for their educational needs or because their herding responsibilities take them away from the NFE learning posts. However, there is evidence that herders have acquired a rich source of local or indigenous knowledge, although the nature of that knowledge and how they learn has not been well documented. This qualitative study, involving educational life history interviews with 30 herders, provides empirical evidence of that learning, with examples of how some herders have utilised that learning for economic empowerment. It used the theoretical framework of Indigenous Knowledge (IK) and social capital, drawing on constructivist notions of learning. The findings illustrate that the herding lifestyle itself is a learning resource, both practically (through locally devised learning techniques) and socially (through social capital and social support). The forms of IK that comprise that learning have been categorised as local practice and local science. Recommendations include the need for NFE provision to embrace/capitalise on the herding lifestyle and social networks as well as their indigenous knowledge practices.

**Keywords*:*** Indigenous Knowledge, non-formal education, social literacy

## 1.0 Introduction

Lesotho like many African countries is a patriarchal society where roles and responsibilities are engendered. As a result, Basotho males have the responsibility to carry out the age old herding responsibility as a cultural rite of passage to learn how to be ‘real men’ (Pitikoe, 2016a). Almost every male is initiated into this role at an early age (Ratau, 1988; Morojele, 2009; Makoa & Zwilling, 2005) to learn informally from their elders and family members by following them around when going to the veld. In the end, males become deprived the opportunity to attend formal schooling due to the value which Basotho attach to livestock (Pitikoe, 2016).

Poverty has also been identified as a global concern that prevents access to education (UNESCO, 2012a). In the case of Lesotho, males are socialised as providers who end up becoming the first resort to turn to when the family's financial situation is adversely affected. Due to their low or non-existent education level, most Basotho males seek employment as hired herders in order to provide for their families. This responsibility either compels them to drop out of school or not to attend school completely. Therefore, most of them enter the adulthood stage either as complete illiterate or semi-literate adults**.** As a consequence of this herding culture studies reveal that unlike other African countries, Lesotho has higher reported numbers of female literacy than males (Ministry of Health (MoH), 2013; Morojele, 2009, 2011b; Setoi, 2012).

Lesotho is mainly divided into three geographical zones namely: the lowlands, the foothills and the highlands (Ministry of Health and Social Welfare (MoHSW), 2009). The lowlands are mainly used for agricultural purposes while the foothills and the highlands are used for livestock farming (MoHSW, 2009). These areas where livestock is practiced are mostly hard to reach, as a result, limiting access to social services such as health and education.

## 1.1 Statement of the problem

Herding in Basotho culture takes the first priority over formal education as it prevents male access to formal education. The Free Primary Education provision which was introduced in Lesotho in 2000 does not seem to fully cater for the education needs of the herders. This is evidenced by the high numbers who drop out of school to herd livestock. Non-formal education has therefore been identified as the potential learning mode for the herders. However, due to lack of formal policy documents that support the delivery of NFE in Lesotho, NFE is accorded a lower status than formal education.

Despite their low literacy level, the herders do not want to remain herders forever. They want to be engaged in some form of income generating projects that would empower them economically (Preece, Lekhetho, Rantekoa & Makau, 2009; Pitikoe, 2012; 2016, Pitikoe, 2016a). However, not much is known about the herders' educational ambitions and the types of income generation projects that they would like in order to develop a curriculum that would best suit the herders' educational needs. This information gap calls for a need to understand the educational life histories of the herders and the income generation projects that they would like to engage in.

## 1.2 Purpose of the paper

The paper seeks to identify the educational life histories, learning experiences and educational ambitions of adult male Basotho herders in order to inform the development of a curriculum that would best suit their needs and help them to move out of herding using the indigenous knowledge they have acquired through their herding practice.

The paper is divided into the following sub-sections: literature review, theoretical framework, and techniques, followed by results, discussion of findings, conclusions and recommendations.

## 2.0 Literature review

The general key characteristic of herding outlined in most studies conducted both in India and in Africa is its semi-nomadic nature where families either move along with the livestock or seasonal relocation of herders from home to spend time away with the livestock in search of pastures. (Dyer, 2010; 2014; Ratau, 1988; Lawson et al., 2014; Seno & Tome, 2013; Schlee & Shongolo, 2014; Kubuitsile, 2012; Aderinoye, Ojokheta, & Olojede, 2007). In the process, access to formal education is negatively impacted on because the formal education provision does not cater for the nomadic lifestyle in that it is provided during the day at the same time when the herders have to be out in the veld looking after the livestock. Upon return home, re-enrolment of the nomadic children becomes a challenge (Dyer, 2014) which results in high drop-out rates.

In Lesotho, the semi-nomadic feature of herding is practiced in two ways: there is one where herders commute daily from home with the livestock to the veld in the morning and return in the evening or temporarily relocate from homes to spend some time in the cattle posts with the livestock (Makoa & Zwilling, 2005; Ratau, 1988; Nthunya, 1996; Pitikoe, 2016, Pitikoe, 2016a). They later move back to the village when the winter season sets in due to the harsh weather conditions in the highlands. Literature on herding practice in Lesotho is mainly narrative where herders present their stories on their herding experiences.

The literature section describes stories on the herding experiences about Mojalefa Makepe, Motlalepula Salemane, Julius Matsoso, and Thabo Makoa. These stories reveal among others; the age at which they assumed herding, the challenges which were brought about by herding in their lives, how they learned to cope and their educational backgrounds. The stories further reveal how herding prevented these herders to participate in formal education activities (Rayner, 2010; Makoa & Zwilling, 2005; Mahe, 2009).

These stories generally reflect the backgrounds of many Basotho males. Rayner (2010) documented stories of three herders: Mojalefa who started looking after the animals at a very young age; Motlalepula who dropped out of high school; and Matsoso a former herder, helping other herders to learn. Rayner opines that the nature of the herding responsibility deprives Basotho males of education about lifeskills and sexually transmitted diseases regardless of their possibility of being sexually active which was indicated in the story of Motlalepula Mohapinyane, a teenager aged 16 years from Thaba Bosiu Ha Khoabane in Maseru. While Motlalepula dropped out of secondary school after completing Form B – equivalent of Grade 9 in South Africa, his knowledge of HIV was very limited coupled with his inconsistent use of condoms. The herding responsibility did not give him much choice to leave the animals in order to attend HIV and AIDS activities that took place locally (Rayner, 2010).

Makoa and Zwilling (2005) construct a collaborative story, in which Zwilling, an expatriate who had befriended a former herder Thabo Makoa documents on paper the herder's narration. The story of Thabo Makoa shows how, in spite of lack of schooling, he took an opportunity, with the assistance of the expatriate, to further his studies until he attained vocational education and ended up being an instructor in one of the vocational training

institutes of Lesotho. This exposure further opened doors for him to visit the expatriate abroad.

These two herders did not have similar up-bringing backgrounds. Thabo had assumed the provider role for the family by becoming a hired herder at a very tender age of three years following his father's death and this deprived him his basic right to education. While Motlalepula on the other hand had been exposed to some form of literacy and he was looking after the family livestock (Makoa & Zwilling, 2005). Examples such as Thabo's story are regarded as the worst form of child labour cited in US Labor Department (2011).

These stories indicate that there exist two literacy levels among the herders as indicated in the statement of the problem section – one of complete illiteracy and the other of semi-literate (Rayner, 2010; Makoa & Zwilling, 2005; Mahe, 2009). There is also an indication that most of the herders come from humble beginnings (Makoa & Zwilling, 2005; Mahe, 2009). Regardless of their low literacy levels, the herders have their own aspirations in life as presented in the story of the 32 years old Julius Matsoso Majoro which is written by Mahe (2009).

While Matsoso had been a former herder himself, he later taught in one of the NFE night schools. His new responsibility was inspired by his herding experience of the ill-treatment that the herders were subjected to by the livestock owners and the lack of both literacy and numeracy skills among the herders the latter being crucial for monitoring the livestock (Mahe, 2009). Stories like Julius's inform the basis of this research study as they illustrate the ambitions and concerns of the herders to move to higher levels in their lives.

While the literature argues on the herders' undying ambition to move out of the herding fraternity and become economically secure (Preece et al., 2009; Pitikoe, 2012, 2016, 2016a) the literature does not provide a detailed discussion of the different kinds of income generating activities that the herders engage in or aspire to engage in, using the indigenous knowledge that they had acquired from their herding experience. This knowledge gap calls for a need for a more theorized study that would provide a better understanding on how the herders acquire knowledge while herding and how they apply that knowledge to generate income.

## 3.0 Theoretical Background

### 3.1 Indigenous Knowledge

The study was grounded in two main theories: Indigenous Knowledge (IK) (Smit & Masoga, 2012; King, 1999; Emery, 2000; Nakata & Langston, 2005; Nyiraruhimbi, 2012; Lekoko & Modise, 2011) and social capital (Bourdieu 1985; Ferlander, 2007; Hawkins & Maurer, 2010). Indigenous Knowledge as a concept refers to the cultural and context specific knowledge that is developed orally over time and generationally inherited (Smit & Masoga, 2012; King, 1999; Emery, 2000; Nakata & Langston, 2005; Nyiraruhimbi, 2012; Lekoko & Modise, 2011). Nyiraruhimbi identifies three ways of looking at IK. Firstly, as local science where knowledge is consciously developed over time using local technologies that bring about a significant change in the lives of the indigenous people, for example the use of

traditional herbs (Moteetee & Van Wyk, 2011). Secondly, as local practice where knowledge is developed unconsciously over time through trial and error methods, for example the arts and craft activities. Finally as local memory which refers to abstract and memorised knowledge that resulted from the socialisation process such as folklores. The implication here is that by virtue of being communally owned, IK can be regenerated to economically benefit the local communities (Odora Hoopers, 2002; Briggs, 2013).

This paper explores the herders' educational ambitions and how they acquire IK as a collective. It is highly likely that economic empowerment cited in Pitikoe (2012; Preece et al., 2009) will reflect among their educational ambitions.

### 3.2 Social capital

Bourdieu (1985) defines social capital in terms of the totality of the resources owned by a network of people which could have either come together formally or informally.

There are three types of social capital identified in the literature where each type facilitates access to different forms of social support. Bonding social capital is narrow and localised within homogeneous relationships. Bridging social capital on the other hand extends to heterogeneous networking (Ferlander, 2007; Thomas, 2002) while linking social capital extends into institutions and people in positions of power (Hawkins & Maurer, 2010). It was evident from the theoretical literature that people with substantial networks have access to a bigger volume of resources that can contribute to lifelong learning and livelihood development (Bourdieu, 1985).

## 4.0 Techniques

The study was qualitative, based on the interpretivist paradigm (Chilisa & Preece, 2005). It followed the narrative life history approach (Orton, Mitchell, Klein, Steele, & Horsburgh, 2013; Trahar, 2006) drawing on data collected from thirty herders aged between 18 and 45 years who came from the lowlands, foothills and highlands. The rationale behind the age range was to examine the level of access that the younger herders - 18 and 30 years have had to the Free Primary Education (FPE) provision that was introduced in Lesotho in 2000 and to explore what other forms of learning the older herders – 31 – 45years had been exposed to.

The data collection methods were interviews (Orb, Eisenhauer, & Wynaden, 2001; Ekaju, 2011), transect walks and photo voice (Adams et al., 2012; Palibroda, Krieg, Murdock, & Havelock, 2009). The different methods contributed to building up an in-depth picture of the herders' life histories. The descriptive nature of life history narratives enabled me to explore the herders' educational values and their educational ambitions.

The data were analysed inductively, using the pattern coding method to identify patterns and themes, and deductively as cited in Hesketh (2004) and Arthur, Waring, Coe, and Hedges, (2012) through the theoretical lenses to categorise the themes and explain the findings at a more abstract level.

## 5.0 Results

The findings under this section indicated that the herders acquired a lot of knowledge informally amongst themselves while herding and that this knowledge was generationally inherited. Most of the learning was oral, practical and context-specific. This knowledge could potentially become a valuable resource in curriculum development for further learning.

This section firstly presents the brief profiles of four herders who provided rich data on the acquisition and application of IK for income generation. The profiles will be followed by the results as informed by the herders' life histories from the study which will be categorized into three sub-themes of IK as; local science and local practice as referred to in Nyiraruhimbi (2012). However, it is note-worthy that from these results, the application of local memory by the herders was very limited.

### 5.1 Herders' profiles

The herders' profiles are presented in Table 1 below. The profiles indicated the age of the herders and their educational life histories at the time of study. The table further presented the age at which these herders started herding, the geographical zones from which the herders came and the IK projects they were engaged in.

*Table 1: The herders' profiles*

| **Name of herder** | **Age** | **Highest Education level** | **Age at which herding started** | **Zone of origin** | **IK project** |
|---|---|---|---|---|---|
| Alex | 27yrs | Std. 5 | 3yrs | FH | Sells traditional herbs (LS) |
| Semonkong 1 | 29yrs | None | 14yrs | HL | Sells traditional herbs (LS) |
| Linakaneng 10 | 35yrs | Std. 3 | 16yrs | HL | Arts and crafts (LP) |
| Doctor | 43yrs | None | 5yrs | HL | Traditional herbalist and arts (LS and LP) |

In Table 1 above the herders' age ranged between 27 and 43 years. From the findings, it was evident that the younger herders were more educated than the older herders. Additionally, lower literacy rates were recorded in the highlands as opposed to the foothills. The findings further indicated some variations on the age at which herding was started where some herders resumed herding at a very tender age of 3yrs while others started herding at the age of 16yrs. There were two main categories of IK income generation projects that the herders were engaged in namely: local science and local practice where herders either sold traditional herbs or were engaged in arts and crafts with one herder who practiced a combination of the two.

### *5.1.1 Local science*

The local science section indicated how the elders and other herders played a significant role in teaching the herders about traditional. Some of the knowledge was also acquired through interaction with the herding environment. The sub-themes under local science section included knowledge of: traditional herbs for human medicinal use and traditional herbs for income generation.

#### 5.1.1.1 Traditional herbs for human medicinal use

The hardships under which the herding role is carried out and the limited access to social services, including health, meant that the herders had to equip themselves with the necessary skills to cope and care for themselves using the available traditional herbs.

Semonkong 1 described how they accessed health care at the cattle posts using traditional herbs by listing the herbs that they used and the ailments that are cured by those herbs. He continued**:**

> If we get sick at the cattle posts suffering from common cold we collect *phate ea ngaka, phefo and kuena* and boil them together and then drink the mixture. We also cut some fresh *kuena* leaves and stuff them in our nostrils to inhale the minty smell in order to unblock the nose.

#### 5.1.1.2 Traditional herbs for income generation

The herders provided several examples of how they used the herbs for this purpose. For instance, Alex explained how social support became his learning resource for learning about the different traditional herbs. Alex identified a number of herbs and what they are used for as follows:

> The other herders have taught me the various traditional herbs that I can use to cure some minor illnesses. I know how to dig these herbs and I also sell them to the tourists or people that pass by. This bunch is *ralikokotoana* or *monna motšo* and we mainly use it for 'servicing' the body. It is tasteless and can be chewed or boiled. The most important part is this black bark. If chewed, it becomes a mild purgative. It is good for curing gall related problems and discharge. It also works very well when mixed with *sehala hala sa matlaka*. This one is called *moli* and it is good for cleaning the blood in that it promotes blood circulation and opens the veins. This is *qobo;* it functions like *moli*, and it also heals women after giving birth. I sell each of these bundles for R5.00 while *ralikokotoana* is the most effective we however encourage people to mix them into a concoction of crushed herbs and then boil before consumption.

Semonkong 1 elaborated on how he prepared the various herbs that he sold. In his explanation he identified different methods that he used to prepare the herbs: crushing, boiling and bundling. He narrated:

> In order to prepare the medication before boiling, I crush the herbs and then let them boil for some time to be ready for drinking. Then I let them cool and pour into a container to be ready for sale. I either sell them in bundles so that the customer can prepare the medicine at home or in liquid form ready for drinking.

In these stories, the herders explained how their local science knowledge was acquired through being transferred from one generation to the other. They further outlined the different ways through which they applied their local science. The findings illustrated that medical care and treatment seemed to be a very important component of herding life which later translated into income generation for the herders.

The use of local science in using the traditional herbs is affirmed by Moteetee and Van Wyk (2011:211) who argue that:

> Medicinal plants are used in many forms. They are taken as deconcoctions – mostly with water - or infusions either orally or as an enema for various internal ailments…

### *5.1.2 Local practice*

The findings on local practice revealed how the herders used the locally available resources to produce arts and crafts material. As with the case of local science, the local practice knowledge was learned through interaction among the herders where environment played an important part in promoting learning as stated in the story of Linakaneng 10.

Linakaneng 10 explained how the locally available resources coupled with learning from other herders have enabled him to sell some products and make money. His local practice knowledge is in the form of grass hats and walking sticks. He continued:

> The other herders have taught me to make hats using grass and when I go to the village I sell them for R120.00. I also learned to make walking sticks using *kolitšana* which I sell for R100.00 back in the village. Sometimes I cut *mosea* and tie it into bundles which I place along the main road and sell to local people. Ladies back in the community use *mosea* to make traditional brooms. I sell each bundle for R30.00.

Doctor, explained that besides learning herbalism from his grandfather, as a former herder, he also learned how to weave the grass hats. He stated that during herding time, he was weaving the hats for himself. However, he came to Maseru and among the projects that he embarked on was the selling of sun hats in different patterns. He mentioned that his market was mainly people from outside of Lesotho. Alongside the hats, Doctor also sold decorated traditional mats, animal skin hats and Basotho hats.

These stories and their examples revealed the extent to which the knowledge acquired during herding was being used to transform the economic status of the herders. From the findings, it was evident that despite their low (or lack of basic) literacy skills, social support and the social environment played an important role in enabling learning to occur amongst the herders. It was also evident that they did have an understanding of financial literacy and numeracy.

The herding context provided the herders with an opportunity to learn and share information within a closed social capital network. By virtue of having similar characteristics (Ferlander, 2007; Thomas, 2002; Hawkins & Maurer, 2010), sharing and learning together became easy amongst the herders.

## 6.0 Discussion of Findings

The herders' types of knowledge revolved around their herding role and the environment under which they worked. Their expertise, according to the findings, extended to understanding the value of traditional herbs which were used both for human medicinal care and income generation. Their projects drew on the knowledge acquired from herding where some sold the traditional herbs, others sold sun hats and some sold walking sticks.

One of the critiques of IK was its oral nature and being context specific. However, scholars argue for the need to interrogate the applicability of traditional knowledge further as a resource for economic empowerment (Nyiraruhimbi, 2012; Briggs, 2013). Lekoko and Modise (2011) also argue for the need to apply the African Indigenous Learning (AIL) framework as a tool for creating a better understanding of the educational needs of the society. The implication here is that the AIL approaches acknowledge the collective African nature that can enhance further learning opportunities among the herders.

## 7.0 Conclusion

In this study, the significant others were identified as influencing medicinal and arts and crafts knowledge among the herders. Their IK was therefore useful in their herding contexts but only some were able to package it for use outside the herding community. This indicated that NFE programmes that broaden linking social capital networks would extend the potential for growth and development.

## 8.0 Recommendations

In appreciation of the cohesive nature of the herders the study recommends that the neighbouring cattle posts be grouped together as learning posts to provide a source of motivation among the learners and a sense of belonging. The findings illustrated that the herders' main form of social capital was bonding which kept them together as a group and provided opportunities to learn from each other. While the findings did not reveal much access to linking social capital among the herders, the study recommends the consideration of linking social capital (such as access to businesses and other training providers) in designing NFE programmes for the herders, as it can play an important role in helping the herders to 'get on' with their future learning aspirations.

The literature highlights the oral nature of IK and the lack of documents that can be widely shared. The study recommends developing a collection of Lesotho specific IK which the herders acquired through herding and documenting the findings in English and Sesotho so that it can be taught in schools and shared widely.

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# PRIMARY SCHOOL EDUCATORS' EXPERIENCES OF TEACHING AIDS ORPHANS AND VULNERABLE CHILDREN

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## Abstract
This paper presents the findings of a qualitative case study of 4 educators' experiences of teaching orphans and vulnerable children (OVC) due to acquired immune deficiency syndrome (AIDS) in two primary schools in Pinetown district of KwaZulu-Natal. These educators gave a profound description of their personal and professional experiences of teaching OVC from which two major themes stood out; Educators experiences of teaching OVC and educators' competences. The paper is located within the interpretivist paradigm and is qualitative in nature. It used semi structured interviews to generate data from educators. In analyzing the data, the researcher employed Bronfenbrenner's Ecosystemic theory to give meaning to the experiences of these educators. Result indicated that primary school educators relied so much on school sending them out for training on how to care for OVC, whereas they can do this on their own, on a part-time, to enable them care for OVC. This will portrays how serious they are with the issue of caring for OVC on a more holistic and professional level. They also relied on some external assistance, whereas the challenges of OVC can better be viewed internally through collaboration between School Management Board and other educators, also by encouraging other peers in that school who are from the stable home to freely relate with OVC and see how this relationship can positively influence the life of OVC as some of the OVC find it more suitable talking to their fellow learners than talking to the educators. It is therefore recommended that primary school educators' involvement should go beyond their participation as recipients of service, they should endeavor to have an understanding of contextual and social factors related to AIDS orphans and vulnerable children in their school context. Therefore, it is expedient that educators should profoundly explore orphan hood especially the AIDS orphans and vulnerable children in these areas and design intervention programmes to ameliorate their negative experiences.

**Keywords:** Educators' experiences, teaching, AIDS orphans, vulnerable children and educators

## Introduction
The continued prevalence of human Immunodeficiency virus (HIV) and AIDS is a cause for alarm and warrants an in-depth exploration to stem the tide (Mousa and Kipp, 2004). According to the World Health Organization WHO (2015) human immunodeficiency virus (HIV) is the world's leading infectious killer, as an estimated 36 million people have died since the first cases were reported in 1981 and 1.6 million people died of HIV/AIDS in 2012 alone. Globally, 35.7 million people are currently living with HIV/AIDS. An estimated 2.3 million individuals worldwide were newly infected with HIV. This implies that 1 in 20 adults in Sub-Saharan Africa is living with HIV/AIDS (Avert, 2007). The number of AIDS orphans in sub-Saharan Africa was estimated to be around 11.6 million in 2007 (UNAIDS, 2010)

In the context of the HIV and AIDS pandemic, the rising figure of orphaned children and child-headed households is becoming a challenge, with far-reaching implications for many

countries. In South Africa, the onslaught of HIV continues to hit hard; a report by SABCOHA (2007) indicates that South Africa is continuously and critically being impacted by HIV and AIDS. Among the groups most severely affected were women and children (UNAIDS, 2015). With the devastating effect of HIV and AIDS in South Africa, teachers therefore, have a responsibility of delivering quality and effective HIV and AIDS educative knowledge to orphans and vulnerable children about positive behavior that mitigates the effect of the pandemic with the same dedication as other areas in the school (Rajagopaul 2008). According to UNAIDS (2015) people need to be educated to change their sexual behaviour, which is the best way to reduce the spread of the virus. In the same view Badcock-Walters et al. (2004) postulate that cognitive and literacy skills are required to make informed choices on HIV/AIDS. It is therefore evident that there is a wide acceptance of the key role of education as the only effective existing "inoculation" against HIV and AIDS (Rajagopaul 2008).

Of a colossal concern and profound interest to this paper is the plight of OVC, how the educators are experiencing teaching orphans and vulnerable children in their classroom and how the educators can be equipped to be able to deal with challenges facing them as a result of teaching orphans and vulnerable children. The broad research aim of this paper was to explore the experiences primary school educators in teaching AIDS orphaned and vulnerable children and how they can be enabled to respond to the challenges of teaching these children.

**Motivations**

Firstly, my motivation for this paper was as a result of my personal experiences as an orphan. After the death of my parents. I became vulnerable as no one was available to support and take care of me, except for my uncle of whose wife saw my ordeal as an opportunity for her to turn me to their houseboy, I was domesticated in various ways to the extent that I was physically and emotionally abused on a daily basis, and that affected my education adversely until an educator in my school came to my rescue.

Secondly, I chose this topic for this paper as a result of the alarming rate of parental mortality in sub-Saharan Africa, especially South Africa, which has led to the escalating number of vulnerable learners in our schools especially AIDS orphans. The number of orphans in sub-Saharan Africa was estimated to be around 11.6 million in 2007. The number of children who have been rendered vulnerable by the pandemic is inestimable (UNAIDS, 2008). Since the educators are perceived as the main role players with regards to their appropriate experiences in the application of inclusion towards these vulnerable learners at schools, on that note, therefore, it arouses my interest to investigate the experiences of these educators of teaching AIDS orphans and vulnerable children (OVC). Now as an educator, I feel challenged by the ordeal of these AIDS orphans as they may lack their basic survival needs as mentioned above and these may tend to be a barrier towards effective learning. Therefore, in this paper, in order to understand more about teacher's experiences of teaching AIDS OVC, literatures on children's vulnerability due to HIV and AIDS and Educators' experiences of teaching AIDS Orphans and Vulnerable Children was reviewed.

**Literature review**

**Vulnerability and HIV and AIDS infections among school children**

In this paper, it is vital to make it clear that previous researchers have carried out different researches on the explanation of what OVC is. The term vulnerability is profoundly varies; it

has various definitions in different nations. It could be as a result of poverty, child abuse, sex abuse, drug abuse, homelessness or by the pandemic HIV/AIDS. Whiteside and Sunter, (2000) define vulnerable children as those who as a result of the death or illness of an adult who contributed to their care and/or financial support, who now find themselves in a compromising situation. The World Food Programme report, (2007, p.12) states that: "the notions of a vulnerable young adult are social hypotheses that vary from one culture to another". Additionally, these terms take on diverse meanings that can be at odds with one another depending on whether they were established for the purpose of gathering and presenting quantitative data or for developing, effecting policies and programmes. It is imperative to make this distinction and establish a 'firewall' between definitions developed for one purpose against the other.

According to Cornia and Morch, (2002); and Ebersohn and Eloff, (2002) the overall problem posed by AIDS has now been recognized, if belatedly, in most countries including South Africa but the specific effect of HIV and AIDS on children remains, with the exception of the orphans problem, poorly documented, analysed and understood. Cornia and Morch (2002) further reveal that recent debate on the effect of HIV and AIDS has focused on adult prevalence and death rates, ways to control the spread of the disease over the short term and its economic impact thus diverting our attention from the recent changes in infant mortality, school enrolment rates and child malnutrition, new ways through which HIV/AIDS affects child's well-being, and the mitigating effects of old and new policy responses that need to be introduced under these circumstances. Even when the analysis has focused on children, it concentrated mainly on children of families directly affected by HIV/AIDS.

Badcock-Walters (2002) and Leach (2002) agree that, for different reasons, schools have emerged as high-risk environments for HIV infection. Main reason for the high rate of infection among school children is the unequal gender relations among young adults, which are frequently defined by violence, assaults and rape by classmates (Coombe, 2002; Leach, 2002). Whereas schools are supposed to be safe places for the AIDS orphans and vulnerable children as many of them do not have parents or any adult to look after them at home (Kelly, 2005).

However, Gow, Desmond and Ewing (2002) and Schonteich (1999) mention that all children will be affected by the HIV/AIDS pandemic, which is now reaping its toll on South Africa and will continue to do so in the foreseeable future with some children being more adversely affected than others. The death of parents and other caregivers as a result of HIV and AIDS renders the affected children vulnerable to social, economic, emotional and developmental impacts (Gow, Desmond and Ewing, 2002; Moletsane, 2003).

**Educators' experiences of teaching AIDS Orphans and Vulnerable Children.**

The experiences of each educator differ when it comes to teaching OVC as some of these experiences will be discussed below.

**The consequences of OVC-related challenges for educators in the classroom**

The various challenges experienced by AIDS orphans and vulnerable children as enumerated earlier are posing enormous problems for educators in the classroom. Orphans are doubly disadvantaged when compared to non-orphans with regard to school attendance. Some of the OVC do not have anyone who can assist them with their homework and support them with

their educational needs like uniform and school learning equipment. In addition, Wood and Hillman (2008) assert that 24% of orphans attend school compared to 60% of children with living parents. They further found that OVC often perform poorly at school and the dropout rates usually increases in areas where there is an increase in the number of OVC. Educators need to be aware of the lack of support of OVC when it comes to homework. In leading and managing their classrooms, they need to be sensitive to this factor and put in place mechanisms to support AIDS orphans and vulnerable children in the completion of their homework.

The growth in the figure of AIDS orphans and vulnerable children in the classroom makes untold demands on teachers, many of whom are not equipped to deal with the special psychosocial and economic needs of AIDS orphans and are deeply affected and traumatized by the challenges of OVC (Theron 2008; Wood and Hillman 2008).

Educators often feel overwhelmed due to their lack of counseling skills when it comes to dealing with AIDS orphans and vulnerable children. Owing to their lack of counseling skills, Kendall and O'Gara (2007) assert that some teachers ignore the grief, tears and withdrawal of Aids orphans and vulnerable children.

Khanare (2008) notes that some educators are frustrated about their work because they contend that teaching is not only about teaching mathematics or English, but it goes beyond that. She adds that teaching is about touching the souls of learners and therefore needs to value the individuality of children. Teachers report that management of classrooms with large number of OVC needs a lot of effort and time.

Many school learners do not want to associate with the special needs children, especially the mentally handicapped. The learners claim that they "fear" the handicapped children and this poses a problem to the educator who is trying to integrate them into the class (Kendall and O'Gara 2007). With this understanding therefore, for these educators to be able to contribute towards the resilience of these vulnerable children, their experiences of what it means to teach them should be explored and the results used to implement interventions. Which is what this paper aims to achieve.

**Aim/Objectives of paper**

The aim of this paper is to exploring the experiences of these teachers of teaching OVC and to understand what they draw on in responding to the issues related to AIDS orphaned and vulnerable children in their classrooms in order to provide support for these children. While the objectives for this paper includes:

- To explore primary school educators' experiences of teaching AIDS orphans and vulnerable children.
- To investigate how primary school educators can be equipped to deal with challenges that result from teaching AIDS orphans and vulnerable children in the classrooms.

**Research questions**

The research design for this paper; exploring the experiences of the primary school educators of teaching AIDS orphans and vulnerable children (OVC), aimed at answering the following questions.

1. What are experiences of primary school educators of teaching AIDS orphans and vulnerable children (OVC)?

2. How can primary school educators be equipped to deal with the challenges that result from teaching AIDS orphans and vulnerable children in their classrooms?

**Methodology**

This paper is a qualitative case study of the cases of two primary schools educators in Pinetown district of KwaZulu-Natal. According to Neumann (2006), case study is ‘‘ an in-depth study of one particular case in which the case may be a person, a school, a group of people, an organization, a community, an event, a movement, or geographical unit’’(p. 40). Neumann (2006 p. 41) orates that most case studies utilize a variety of data generation methods such as interviews, maps, and records in a single case. The researcher in this case aims at capturing the lived experiences, needs, perceptions and meaning making process (Cohen, Manion & Morrison, 2011) of primary school educators about their experiences of teaching OVC. Denzin and Lincoln (2003) state that the benefits of the case study is that it presents a real life experience and offers a complete account of a phenomenon and an insight that would provide the reader with visible experiences of the participants.

The qualitative data of the study was generated using semi structured interviews. According to Khanare (2012) semi-structured interview makes it easy to gain insight into a person’s experiences or what an individual (primary school educator) knows or has experienced and what he or she thinks (Sarantakos, 2005). The semi-structured interview provides the researcher with opportunity of probing deeper, asking clarifying questions and discussing with participants their understanding of the phenomenon. In this research a semi-structured interview was used to generate data for the two research questions. The participants for this study of exploring the experiences of the primary school educators of teaching AIDS orphans and vulnerable children (OVC) were sampled using non-probability purposive sampling. Non-probability purposive sampling was used, as participant were chosen because of defining features that constitute the holder of the data required for the study (Nieuwenhuis, 2012). The participants that were selected for this study were educators who were teaching OVC from the selected two primary schools, the sample size consisted of two educators from each of the selected two schools making a total of four (4) educators that participated in the interview. Also ethics was enforced by ensuring that participants knew their rights and signed consent forms. Permission was also gotten from the primary schools where the interview were conducted. The participants’ names were coded as anonymous to maintain privacy.

The data generated was made sense by using the Bronfenbrenner’s ecosystemic theory (Donald, Lazarus and Lolwana, 2007). A social ecological model of child development is similar to environmental models of ecology. Child development can be influenced in many ways and from many sources (Donald, Lazarus and Lolwana, 2007). The ecological model takes cognizance of the reciprocity and the mutually reinforcing influences of families and the larger socio-political, economic and cultural systems that surround them. Sewpaul (2005) however argues that families are also subject to the powerful influences of socio-political, cultural and economic factors.

From this theory it was realised that each layer of Bronfenbrenner’s ecological model (micro system, mesosystem, exosystem and macrosystem) interacts with the other. If one layer is negatively affected, the entire system will be affected as a result and hinders the human development of the child (OVC) who is involved in the system. For instance, the loss of parent/s either through car accident, HIV and AIDS or the father kills the mother and ended

up committing suicide will surely traumatise the child and this means that the child's microsystem is affected as a result; this will influence the other four sequential layers. This means it would be very hard for this learner to cope with microsystem as well as other levels. His life is affected emotionally, physically, academically and spiritually as there would be no one at home who comforts the child when there is a need. No one guides and encourages him to see the world in a positive way. It is therefore the school which can act as a supportive family towards such learners, to give them courage out of the 'here and now' situation which seems to be miserable and doomed. It is only the educators who can build hope out of the learners' negative thoughts by providing pastoral care, meaning showing love, empathy and parenting (Jacques, 2006). Hence this theory is justified.

The researcher used thematic analysis to analyse data collection, reason being that the focus of the paper is on educators' "experiences", which according to Guest, Mac Queen and Namey (2011) thematic analysis has a primary aim of describing the experiences of research participants and search for themes within the textual data.

**Validity and Reliability**

Firstly, in this paper, I did established validity and reliability by carrying out the same research in two different primary schools as one was a senior primary public school while the other was a junior primary school and the respondents were both male and female educators. Secondly, during the semi-structured interview schedule, data were generated and transcribed and the transcript were made available to the participants to read and verify that it was a true reflection of the information they have given. To further establish reliability, the researcher used voice recorder which was replayed after the interview for both researcher and the participants to agree on what appeared from the recorder and the transcript during the interview.

**Discussion of findings**

In this segment of the chapter, firstly, the two main themes which emerged from the inductive data analysis of the educators' interview at their different schools will be discussed. Secondly, I will discuss the list of the resources that emerged when the four educators during their individual interview, responded to the second research question.

***Educators' views on AIDS (OVC)***

The four educators gave different views on how they identify AIDS orphans and vulnerable children (OVC) in their classroom, but the common sentiments being their view on AIDS (OVC) as children who are living with AIDS and have lost their parent(s), living with sick parent(s) or care giver or living with family members or those who are struggling to survive on their own. This is in same view with Whiteside and Sunter, (2000) as they define orphans and vulnerable children as "children who are compromised as a result of the illness or death of an adult who contributed to the care and/or financial support of the child. Some educators further gave their view on AIDS OVC as follows:

*"They are children living with HIV, from poor social background, from deceased parents, not getting grants from government, some are those whose parents are sick and dying and they are also those who are experiencing negative emotions"* (Educator A)

Almost in same view with the above, Educator B stated thus:

*" They are the needy children coming from home where there is no one working to adequately support them"* (Educator B)

Nonetheless, some responses were very optimistic and descriptive as they depicted OVC as the physical signs they see on them, thus:

*They are those children with strange behaviors… they look so unhappy, tired, sick, yawning and sleepy* (Educator C)

Educator A specifies more on their appearance and the stories they tell, as she stated thus:
*'OVC are those learners who are untidy in dressing, late coming late to school and are noted for absenteeism due to their ill-health, they are those children who will tell you that, sometimes they don't get food from their relatives that they stay with and if they ask for food they will be beaten up terribly with bruises all over their body'* (Educator A)

From the above educators' comments on AIDS (OVC), all the participants specified that the easiest way to identify and view OVC is through their appearance, complain for food and some strange behavior that they do manifest. The above words of the participants indicate that these educators identify OVC from different perspective in the classroom. Van Leer (2005) points out that, the key to support OVC is potential for the teachers to identify OVC in their classroom.

The strategies such as physical appearance, neglect of homework and poor health used by the teachers to identify OVC are supported by Jacques (2006). He indicates that such children may be observed to be poorly dressed, malnourished, anxious, chronically tired. They can be easily identified because of their appearance that makes them different from other children who are not vulnerable. This is further confirmed by Robson and Sylvester (2007, p.266) in their study conducted in Zambia where participant teachers reported that "orphans are often badly dressed, psychologically and emotionally traumatized due to lack of parental love and vulnerable children are physically abused".

Alternative way to view and identify OVC in the classroom is through their non-completion of homework. This is due to the lack of parental support for OVC in their learning. This might have the effect of reducing the OVC's interest in learning. Thus their academic work would be negatively affected. Khanare (2009) contends that, children who lack homework support may develop a low motivation for learning. Additionally, Van Wyk and Lemmer (2007) affirm that children who are aware that their parents are interested in their school work, experience emotional stability and security, are better able to adjust to school, and better able to overcome obstacles. On the contrary, this is not possible for OVC because they do not have any parent to assist them.

***Educators' experiences of AIDS orphans and vulnerable children***

Based on the data collected from all the educators during their interview, it is established that they all have different experiences of teaching AIDS (OVC) in their classrooms as some of these experiences are negative while others are positive. Therefore, the educators' experiences of teaching AIDS orphans and vulnerable children were grouped into the

following sub themes that developed from the data: *Negative experiences and positive experiences.*

***Negative experiences***

Some of the educators that were interviewed in this study find it so challenging to teach AIDS (OVC) as some of them responded thus:

*'Some OVC in my class always vent their anger on other innocent children in the class as a way to ease themselves of any pressure from home, to this effect I ensure that I make all the learners aware that every child in the classroom has to be respected. No one has the right to bully another. I laid the rules that if anyone breaks that rules, such learner should be reported to me'*. (Educator C)

Many of the OVC children are psychologically affected as a result of dying and loss of parent, abuses, abandonment etc. therefore, they vent their anger and frustration on other innocent learners. The children thus deserve a safe, nurturing and democratic learning environment where they can learn in an atmosphere of endurance, respect, gentleness and trust (Henchey, 2007).

Some of the educators do established classroom guidelines and rules on how learners should treat each other. Developing rules help the teacher to avoid learners being hostile and destructive.

Henchey (2007) further, this makes children aware of the expected standard of behaviour in the classroom. Among some teachers there is the focus on mutual respect among children. Wood (2008, p. 186) points out that in order for OVC to feel and accept that they are safe; teachers' encourage learners to show respect and listen to each other".

Some educators' negative experiences is based on how OVC's parent/guardian are abusing these children at home and their refusal to attend parent-teacher meeting to discuss issues that concerns OVC as they stated thus:

*'In most cases when we realized that OVC has been physically abused by their relatives or caregivers and we send letters from the school to invite the caregiver or parent of the abused child to school so that the ill-treatment of the OVC can be discussed and make them realize the implications of doing that to a child but they don't honour the school invitation"* (Educator A)

***Positive experiences***

Despite many negative experiences of the educators of teaching OVC, there are some educators who stated some positive experiences. As regards the issue of hunger in which many of the OVC attend class on empty stomach without food, some of the participants highlighted on their personal plans to support these children in the area of food supply for them, as they stated thus:

*Most of the time I shared my lunch with the few OVC that are hungry in my classroom and I enjoy doing that as I know God will reward me for that. There are times I use my personal money to buy them bread to take home (Especially the few ones in my class)*. (Educator B)

This reveals that some of the educators have accepted these children as their children and treat them specially and softly as one educator said she sees herself has their parent, as she is aware that some of the OVC lack parental love, care and direction in their lives. This exhibits that some educators do go the extra-mile to be both educators and parent to OVC.
Educator A pointed out that:

*"When these kids start showing some disruptive behaviour firstly, I ensure that I inform my colleague about it to seek their opinion as some of them have dealt with such behavior in the past".* (Educator A)

The educators do take some initiative in handling the disruptive behaviors shown by OVC. They chose to work in collegiality with other colleagues in order to help OVC solve their disruptive behavior (Steyn and van Niekerk, 2007). Collaborative discussion is one of the key factors in a democratic school environment. This enables the educators to seek advice from colleagues in other to part find solution to the OVC disruptive behaviour.

Therefore, in any vocation people can get reliable advice from the people of that same vocation because they might have experienced the same problem before and overcame it, in the same vein, the reliable advice from other educators who teach OVC would help the other naïve educators to effectively and efficiently resolve and path find solution to OVC disruptive behaviours. Elbaz-Luwich (2010) confirms the above by stating that professional communities in teaching are an influential source of support that that would produce significant insight and contribution over time to the development of their teaching, the system will be helpful especially to a newly employed educator with little experiences of teaching OVC.

Teachers, through creative classroom management strategies, can play a fundamental role in the integration of OVC with other children in order to transform them. In this case the educators are expected to see their vocation more as a calling than just a profession, which will definitely stretch them to go the extra-mile in meeting the needs of OVC.

The management of classrooms with OVC places a need for teachers to create an allowing classroom environment that would address OVC's needs. Teachers need to create an environment wherein OVC would feel loved, secure and valued because they do not receive such support at home (Wood, 2008).

**Conclusion**

In concluding this paper, it is vital to note from the findings that the negative experiences of the educators outweigh their positive experiences, therefore, effective support for educators to overcome the negative challenges that they are faced with in having AIDS orphans and vulnerable children in their classroom must be seen as a central part of school provisioning, and the school needs to draw on all 'stakeholders' in their effort to achieve this goal. Collaboration is a key factor both in the school community among educators and also in the wider community that involves other stake holders, which has the potential to create a synergistic effort.

Some recommendation in this paper includes; that the Department of Education in collaboration with school management board should award bursary and grants for AIDS

orphans and vulnerable children (OVC) as the majority of them, if not all of them, are coming from poor family set up, as a way of alleviating poverty facing OVC. This will also reduce the financial burden on the educators who goes the extra-mile to make OVC's life comfortable. As the educators' wellbeing will positively affect their teaching performances.
Educators training on handling the challenges of AIDS orphans and vulnerable children (OVC) in the classrooms should be included in the educator's training curriculum. Most of the participants were not trained as counselors and that makes them not fit to work with vulnerable learners like AIDS orphans. Adequate training to handle the issues of OVC will be an added advantage on the part of the educators to carry out their vocation effectively.

Educators are aware of the impact of AIDS orphans and vulnerable children (OVC) in the school context. From a theoretical perspective, the educators understand OVC and have gone extra-miles to sort out some of the basic issues that surround AIDS orphans and vulnerable children (OVC) in their classroom, by drawing on their personal resources coupled with collaborating with other stakeholders. However, lack of relevant experience and adequate training to handle the issues of OVC that they are faced with in the classroom has made them to be helpless and that has been a major impediment and concern for most of the educators. De Lange and Stuart (2008) and Bhana, et al. (2004) observe that teachers sometimes lack the skills necessary for addressing learners' problems. This leads to the teachers experiencing stress and a sense of helplessness as they are unable to support OVC who experience problems that might hinder their success in learning. Therefore adequate support for the educators will enable them to respond more positively to the issues of OVC in their classrooms. Mainstreaming the issues of OVC in the whole school programme should be seen as a necessity as these children are born citizens before they become orphaned and vulnerable by HIV and AIDS.

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# TEACHERS' INTERPRETATIONS AND UNDERSTANDING OF TECHNOLOGY AND TECHNOLOGY EDUCATION: A CASE OF TWO SOUTH AFRICAN TEACHERS

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## Abstract
This study contextualized interpretations and understandings to the concepts of Technology and Technology Education by two South African teachers. Even after two decades since its first implementation, Technology teachers still seek answers to questions about what the realistic concept of Technology is. Debates and controversies about the Technology's nature still continue within the discipline. The purpose of this study is to illuminate an understanding to debates around the interpretations of the two concepts - Technology and Technology Education. The following question led and developed the study: What are the teachers' interpretations and understanding of Technology and Technology Education in South African education curriculum contexts? Two teachers who received some form of informal training but with no formal qualifications in Technology subject rendered appropriate focus for this study. In grounding and developing this study, constructivism as a learning theory augured well for use. A case study format was adopted which followed a qualitative approach through which teachers' understandings and interpretations of the concepts were investigated. The two teachers who participated were purposively selected. Structured interviews and observations were the main data collection strategies employed for the study. These followed a brief written questionnaire. The questionnaire was explored in terms of an instrument called implementation evaluation rubric. In order for the instrument to serve the intended purpose, three ratings were developed for data analysis. Each rating was a descriptor formulated by the researcher. The three ratings were necessary in order to capture the teachers' interpretations of the two concepts within the instrument. The development of the three ratings was derived from a review of literature. Data showed varying levels of understanding and interpretations of the concepts between the two participants. Findings from the empirical investigations have shown significant similarities and differences. The findings from the operating contexts of the two teachers indicated that the terminology for the two concepts was explored as a working definition (similarity) and as a preferred (variant) suitable for operational use in the teachers' contexts.

**Keywords**: Technology, Technology Education, Constructivism, Implementation Evaluation Rubric

## Introduction
Dialogues about definitions of Technology and Technology Education as concepts used during teaching and learning of the subject since its introduction in the South African curriculum continue to be discussed. These dialogues about Technology and Technology Education occur as a result of teachers who seek answers to questions about what the realistic definitions of the two concepts are. This in itself poses as a challenge to some teachers who use the terms during teaching and learning. Cited as a challenge is that there are various definitions given to the concept of Technology and Technology Education. The concept of Technology is associated with significantly different perspectives from literature where none

could be rejected. As of those put forward, the meaning into a single definition had not been agreed upon and hence varied available definitions. The study aims to unpack an understanding of debates around the interpretations of Technology and Technology Education terminologies. As things stand, a caution that the use of available language choices narrows the definitions for the terms communicated (Flowers, 2010).

Autio (2016) alluded to the idea that the language choices towards the definition associated with the term is that meaning is from the point of view of everyday life, society, industry, information communication technology (ICT) and environment as well as human dependency on Technology. An addition to the debate is that the term means different things to different people where others would agree that it is about 'stuff' and also a tendency of identifying Technology to products such as computers (Lee, 2011). Stated as is, Technology means the use of knowledge, skills and resources to meet people's needs and wants by developing practical solutions to problems while taking social and environmental factors into consideration according to the Department Basic Education (DBE), (2011). Some scholars assert that Technology is 'applied science'.

This view that Technology is 'applied science' is well accepted in the education area where Technology is used and taught within the contexts of science education. Proponents of science offered examples of how science and Technology were interdependent (Rose, 2007). During the process of equating Technology to science, a paradigm of 'technology is applied science' resulted. However, this "applied science" paradigm is problematic because it is too simplistic, especially as science has also been affected by Technology (De Vries & Tamir, 1997). As a result, defining Technology as "applied science" would not serve the intended purpose. Furthermore, an argument brought in the debate is that if Technology was an applied science (or even an application of science) then the current abstract elements of Technology found in science education would not be there (De Vries, 2003). Nowadays most Technology philosophers accept the idea that technological knowledge differs from scientific knowledge.

This discussion is relevant for the study as the teachers' interpretations of the term Technology is important for their successful implementation of classroom activities. Technology as a subject in the South African curriculum was to be implemented by the same teachers whose voices are pertinent for grounding and developing discussions in relation to the terms in different classrooms when it was first introduced. Because this was a new subject, naturally these teachers experienced Technology as a new subject with its terminology. As a result, teachers had various, at times conflicting, interpretations about Technology. Some of these interpretations were erroneous. Of those put forward in literature, are worth a consideration as they ultimately provide an understanding of the term Technology. In addition, this understanding of the concept is likely to have an impact during teaching and learning.

**Background**

Technology as design is one of the interpretations as put from literature by which from the South African context design serves as a backbone in the Technology curriculum continuum. It means all the classroom activities by teachers in their daily teaching should include the design process. In some cases, the concept Technology is interpreted as design. Technology as design relates to know about and also aims towards standards of the role of troubleshooting, research and development, invention and innovation and experimentation in

problem solving (Nia & De Vries, 2016). Technology as design is a creative, interactive and open ended process of conceiving and developing components, systems and processes and it is also an open ended and experimental component that characterizes problem solving (Asunda & Hill, 2007).

Another of the interpretations to Technology in available literature is Technology as problem solving. Technology as fundamentally problem solving, is a critical thinking skill necessary to address issues related to technology and to develop effective solutions to practical problems (Makgato, 2011). The success in learning towards problem based orientation is to develop generic skills by which learners become more effective problem solvers (Adnan, Karomiah, Abdullah & Wang, 2011). Technology as an activity is also accepted notion as available from literature. Technology as an activity is a plan to use where designing and evaluation, modelling and innovation, together with invention, needs wants and demands serve as important concepts for application and consideration (Nia & de Vries, 2016). In addition, Technology as activity includes more than material objects such as tools and machines and mental knowledge or cognition of a kind found in the engineering sciences. It is a pivotal event in which knowledge and volition unite to bring artefacts into existence (Engelbrecht, Ankiewicz & De Swart, 2006).

Technology Education is part of general education within aims of promoting sustainable production and consumption (Soobik, 2014). Another angle to the definition discourse provided is that Technology Education is a field of teaching and learning (Jones, Bunting & de Vries, 2013). Also as put forward, Technology Education is perceived, as involves something that people have made or done and becomes inherently situated within a society culture and community values (Lee, 2011). The term Technology Education as put in another way is that it is the official curriculum which solidifies the content that is to be taught in classrooms (Brown & Brown, 2010). The concept of Technology Education is seen by literature as the study of Technology where learners learn about the processes and knowledge related to Technology and is crucial for solving problems to meet human needs and wants (Gumbo, 2012). Given these continued dialogues about the definition of Technology and Technology Education, one wonders how teachers interpret Technology and Technology Education within the parameters of the curriculum. It is against this background that a case study was conducted with two Technology teachers to find out what is their interpretation of the terms - Technology and Technology Education. Theory is needed to underpin the understanding of the interpretations of terms in question.

**Theoretical Framework**

Theories in qualitative studies act as bodies at work whereby inconsequential or misleading ideas can be filtered and also as an agent of adding interest and intellectual stimulation for a project (Gray, 2014). Constructivism as a theory grounded the study. Within constructivism, a constructivist learning theory augured well in grounding and developing this study. The basic premise for constructivism is that knowledge is obtained and understanding is expanded through active construction and reconstruction of the mental framework (Killen, 2010). Two diverse models of a curriculum were developed for constructivism as cognitive and social constructivism. Social constructivism treats learning as a social process where learners acquire knowledge through interaction with their environment instead of merely relying on teachers' lecture (Killen, 2000 & Kotze, 2002). An example of social constructivism is group work, where learners can co-plan, and challenge one another with discussions, which target

higher order thinking skills. Cognitive constructivism focuses on the cognitive processes that people use to make sense of the world (Killen, 2010). Constructivism is generally the approach where learners construct their own knowledge from interpreting their experiences (Doolittle, 2014). In addition, constructivism holds that learners learn actively and construct new knowledge based on their prior knowledge (Jaleel & Verghis, 2015).

Technology teachers can serve as agent of change and aid learners' in their construction of new technological knowledge. Unless Technology teachers are capacitated to construct a better understanding of Technology and Technology Education their interpretation will remain questionable. As highlighted that two teachers who received some form of informal training but with no formal qualifications in Technology subject rendered appropriate focus for this study. It was appropriate to engage this two Technology teachers with learning theory as constructivists.

**Research methodology**

This research adopted a case study format which followed a qualitative approach through which the teachers' interpretations of the intended Technology Education was investigated. Purposive sample was used for the study. The relevance of the sample lies in the opportunities provided to the participants in that they had to teach the subject of Technology in their different classrooms. Two purposively selected teachers participated, namely, Thabo from a medium resourced school and Thabang from high resourced school in the same district in Pretoria, South Africa. The two names used for the teachers are pseudo names. The pseudo names were used to conceal the participants true identity. As a result, they became a sample accessible to the researcher. In addition, their contexts were important in order to achieve a comparative design that would provide the similarities and differences during the implementation of Technology Education curriculum using the intended curriculum for the subject.

**Data collection instruments and procedures**

Semi structured interviews and a rating scale were the main data collection strategies used. The name of the rating scale instrument was called implementation evaluation rubric as predetermined and adapted from Kotrlik and Redmann (2009) and Mentzer and Becker (2010) by the researchers. Three rating descriptors such as inadequate, adequate and very adequate were adapted for data analysis in order to serve the intended purpose of the instrument. The instrument used seeks to capture and rate opinions as expressed by the teachers. The process of validating the instrument was guided by Almond, Winter, Camento, Russel, Sato, Clark-Midura, Torres, Haertael, Dolan, Beddow and Lazarus (2010) who claim that the process is valid as long as no new items are added. The entire process of ensuring scientific rigour, reliability, credibility and trustworthiness was followed. In addition, interviews were conducted to verify the findings of the questionnaire. The researchers developed the interview questions (items) with guidance taken from literature as well as findings from the questionnaire. The set of items in the interview which addressed similar themes were coded so as to capture as much detail about a particular theme. The prepared interview schedule was first piloted and discussed for refinement with colleagues in the Department of Science and Technology within one of the researcher's the school. One of the senior teacher form the school agreed upon a pilot interview. This was important to ensure content and face validity (Bennet, 2005).

**Data analysis**

The data analysis used was a descriptive analysis following the nature of the qualitative research. The answers from the interviews were analysed, by using the rubrics containing ratings. Mouton (2000) explains that the aim of analysing data is to determine developing patterns which could be identified and isolated as dominant themes. Using the interviews and the implementation evaluation rubric to gather the data was to produce trustworthiness by employing triangulation Daugherty (2009). Teachers' names, schools' names and teachers' names were removed from the official documents which were included as evidence during data collection. Consent was sought from the two teachers for the interviews. Consent forms were signed by the two teachers with an understanding of withdrawing from the study at any and time. During data discussions, and presentations, as researchers we did not also identify verbatim comments with their names.

**Research findings and discussions**

This section of the study was led and developed by the following research question:
*What are the teachers' interpretations of Technology and Technology Education in South African education curriculum contexts?* A similarity which was noted from the two respondents was that both of them had an understanding of the term Technology. Though varied, a common aspect was in their use of the term relating to capability. A societal dimension (reflected in Thabo) and the art of designing (reflected in Thabang) are fundamental to capability and to the concept Technology. Capability is of apex as a consideration in this study because of its nature in the South African Technology curriculum as one of the tasks in Technology aiming towards high cognitive development of learners in the subject

Data revealed that the participants had varying conceptualizations of Technology. According to Thabang Technology, *as commonly understood, does not only apply to technical drawing; It includes all things" and "is connected to technological development and can be advancements in food technology or in biological life, in structures and in mechanical systems"*. A form of incongruence was evident in the way Thabo explained the concept, and what was actually taking place in his class. He was convincing about his definition of the term Technology, but in his actual Technology lessons there was no follow through action of his knowledge, and no evidence of that knowledge helping him during implementation. Serious investigation challenges during classroom observations were evident where learners possessed no prior investigation capabilities.

In terms of the implementation evaluation rubric which was developed, Thabang is rated as sufficient. On the other hand he explains Technology Education as "*knowledge about technical knowledge; the knowledge is in technical subjects for example machine design. This knowledge is important to achieve the full use of old machines available in our backyards"*. The teacher from the medium resourced context adopted a definition of Technology that emphasized the human attempt to deploy matter, energy and the environment. Emphasis was placed on understanding Technology and its effects in the society in which learners live. He further explained that Technology Education "*ensures the learners' understanding of how the various devices, equipment, and machines work, how to use them, and that their knowledge and abilities of Technology improves".*
On the other hand, Thabo argued that Technology *"bridges the gap between the school and the world in which the learners live. It enables learners to understand the relationship*

*between technological development and their natural environment".* He indicated that Technology Education "*involves the ability to use and produce objects from the environment for particular functions, just as traditional people used trees from their environment to carve wooden ploughs for ploughing their fields".* During classroom observations in Thabang's class learners' actions and thinking showed that they were confident in their assigned completion of tasks. The teacher from the high resourced area in relation to research question adopted a "working definition" of Technology. The emphasis was on development and the learners using skills for problem solving. The context also provided learners with opportunities to experience using their skills so as to appreciate their transferability in different situations. Thabang is typical of a teacher noted in literature as one who has succeeded in developing the learners' ability to conceive that which does not yet exist, to develop a novel system through making technical design decisions, and to make aesthetic decisions which involve how they will make their constructional design. In terms of the implementation evaluation rubric which was developed, Thabang is rated as adequately sufficient in the use and his understanding of the two terms.

**Conclusions**

The two teachers' interpretations of the concepts differed which was similar to a study by Rossouw, Hacker and De Vries (2011). Thabang and Thabo's understandings in terms of Technology had a varied range of the concept Technology. This understanding differed from the notion of Technology as applied science. This finding is similar to a study in Rohaan, Tacomis and Jochems (2009). From the findings in relation to Technology, this finding is important as it raised expectations about Technology Education. Their understanding impacted on Technology Education which is important for their implementation practices.

In conclusion, data revealed that Thabang understands of the term Technology relates to a scientific perspective similar to "design with intention by Rose's (2007). The "technological perspective" of the definition also includes using particular tools. Thabang used the word "development" which indicated solving problems to advance knowledge. On the other hand Thabo understands the term Technology from a sociocultural perspective as understood ideas of Technology, which alludes to an interdisciplinary understanding of the human and the natural environment same as a study by Elshof (2007). A societal dimension (reflected in Thabo) and the art of designing (reflected in Thabang) are fundamental to the concept Technology. Thabang understands the term Technology Education "*ensures the learners' understanding of how the various devices, equipment, and machines work, how to use them, and that their knowledge and abilities of technology improve".* Thabo's understanding of the concept of Technology Education gravitates towards a craft approach in which cultural and manual skills and traditional design are used. The notion aligns with the South African curriculum which requires learners to be able to find out about historical contexts when solving a problem in relation to structures, processing or systems and control which is similar to a study by Lee (2011).

A form of disjuncture was evident in the way Thabo explained the concept, and what was actually taking place in his class. He was convincing about his definition of the term Technology, but in his actual Technology lessons there was no follow through action of his knowledge, and no evidence of that knowledge helping him during implementation. Serious investigation challenges were evident where learners possessed no prior investigation capabilities. These form a backbone in which design as requirement as a skill to be taught by

teachers during daily classroom activities. From the findings in relation to Technology, this finding is important as it raised expectations about Technology Education. Their understanding impacted on Technology Education which is important for their implementation practices. In addition, this finding is a start and hence a recommendation of a future study in terms of how the two teachers' understanding of the two concepts contribute to the learners in their different classes of becoming technologically literate as it is the expected aim for the subject Technology. As to who has listened to the discourse from the two South African teachers' perspectives about the terms, the dialogues still continue. A further investigation is recommended for this section of research study in order to illuminate on the voices of teachers in their understanding to the concepts and as to how the implementation is influenced.

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# SOCIAL INNOVATION WITHIN THE SOUTH AFRICAN EARLY CHILDHOOD DEVELOPMENT SECTOR

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## Abstract
The purpose of this study was to research the key contextual requirements for the success of a scalable social innovation model aimed at building capacity and quality in the South African urban educare sector. A key distinguishing feature of social innovation is its focus on unmet social needs falling within state and market interstices which aren't met by public or private action. The early childhood development sector is an ideal example of the complex societal challenges that social innovation research aims to address. As a field, however, social innovation does not have any overarching theoretical framework or consistent theoretical conception of the social. This research adopts Cultural-Historical Activity Theory both for its analysis of the educare sector and as a guiding framework for the design of the social innovation model. No other research adopting this novel approach to social innovation exists at this time. This study employed interviews, focus groups and participant observation as its primary data sources. Cultural-Historical Activity Theory guided the analysis of the data and proved to be a highly effective approach in understanding the rich historicity and socio-cultural factors within the South African urban educare sector. This study has provided only an introduction to the resultant social innovation model. Subsequent research into the dynamics of related activity systems adjacent to the educare activity system was undertaken and the final resultant social innovation model has subsequently attracted start-up funding and has been implemented.

**Keywords**: activity theory, capacity-building, early childhood development, social innovation

## Introduction
Research into early childhood development (ECD) is of particular importance in South Africa where poverty and other childhood challenges continue to have a significant impact on childhood development (Atmore, 2012). A growing body of evidence underscores the importance of ECD and its direct correlation with the quality of adult life ( Engle et. al., 2011; Martorell et. al., 2010; Gluckman & Hanson, 2009; Shonkoff, Richter, Van Der Gaag, & Bhutta, 2012).

The spectrum of quality related to the services offered by educare facilities is vast and in the great majority of these facilities, including those which are subsidised, the educares are overcrowded, the children are not engaged in educational stimulation, nutritional provision is poor and ECD workers lack training (Unicef, 2005). Whilst some progress has been made in some areas (e.g. nutritional provision to primary schools) the picture of the ECD sector remains bleak and underlines the need for alternative perspectives and models which can shift the landscape towards greater capacity and quality.

## Research Purpose and Research Questions

The purpose of this study is reflected in the main research question: What are the key contextual requirements for the success of a scalable social innovation model aimed at building capacity and quality in the South African urban educare sector?

The study adopts the Cultural-Historical Activity Theory (CHAT) theoretical lens in its analysis of the current system, as experienced by educare facilities in urban, low socio-economic communities. Given the CHAT lens, the research sub-questions to be explored are:

- Who are the key actors and what are the key components of the system?
- What major contradictions exist in the current system?
- What alternative systemic model might these contradictions support?
- What tertiary contradictions surface through the introduction of the alternative model?
- Are there any quaternary contradictions between the alternative model and neighbouring systems?
- How might the alternative model reconcile with the existing system?

**Conceptual Overview**

Despite the varied definitions of social innovation, a key distinguishing feature of social innovations is their focus on unmet social needs falling within state and market interstices and which cannot find solutions via public or private action. As a field, social innovation does not have any overarching theoretical framework or consistent theoretical conception of the social (Mulgan, 2006). Where theories are drawn on they are often focused on the impact of technological change, with the social seen as contextual and social change seen as a consequent of technologically driven change. Generally missing within the social innovation literature are the theoretical frameworks that, firstly, can be applied in a finely granular and nuanced understanding of social systems, particularly social systems characterized by complex historical change and cultural dynamics and, secondly, can conceptualize social systems as wholes instead of as a collection of largely disparate parts interacting with a largely separate environment.

In casting for a theory that met the above social innovation concerns, the researchers adopted CHAT – a particular conceptualization of activity theory (Engeström 1987, 2001). CHAT, carried out diligently, significantly increases the likelihood of surfacing cultural dynamics without the researcher having to necessarily be familiar, a priori, therewith. Further, given that historical and cultural subtleties often prove crucial to any possibility of transformation success, CHAT presents itself as an extremely valuable framework and set of tools for ant social innovation project. The key concept within CHAT is that of an *activity system*. There are six components to an activity system:

- *A subject*: The activity system is defined from the perspective of a particular actor within the system who implements actions within the collective activity.
- *An object*: The focal entity upon which action is exercised for a particular outcome.
- *Tools*: The subject uses mediating artefacts to exercise action on the object to achieve an outcome.
- *A community*: People who share an involvement with the object on any level.
- *Rules*: These are regulations and institutional norms which regulate the actions applied by the subject on the object and how the subject relates to other participants in the system.

- *Division of labour*: This defines the division of horizontal tasks and the allocation of vertical power amongst the participants of the system in relation to the actions applied to the object.

CHAT is governed by an understanding of five major principles (Engeström, 1991):

- The activity system is the primary unit of analysis.
- Activity systems are multi-layered as they consist of conscious, unconscious and institutionalised operations which inform the system's artefacts and rules.
- The system has historicity.
- The components of the activity system experience varying degrees of contradiction. These manifest as tensions between and within components of the system. They are a source of transformation for the activity system.
- The system can evolve through cycles of expansive learning. This is facilitated in the first instance by discovering contradictions and using them to reconceptualise the object and outcome of the activity.

This study focuses primarily on the fourth and fifth principles as they relate to the formulation of new alternatives to the status quo. Engeström's (1987) *theory of expansive learning* emphasizes the community as learners and that the learning is about something that does not currently exist. The learning involves the creation of new objects and concepts that are then collectively applied in new activities. Simultaneously, new forms of agency are created. Contradictions are important to understanding the development potential of an activity system.

**Research Methodology**

The research design centered on the CHAT expansive learning cycle as it could, most readily, be applied to the development of an appropriate social innovation model. The following expansive learning steps were adopted:

- *Step 1*: Define the activity system components
- *Step 2*: Identify primary and secondary contradictions in conjunction with historical and/or empirical data.
- *Step 3*: Use the contradictions to formulate a new model for interaction within the system and assess the impact of the alternative model on the activity system.
- *Step 4*: Identify tertiary contradictions (through conceptual extension of the existing system) and quaternary contradictions (through implementation of the conceptual extension of the existing system).
- *Step 5*: Re-align the model with neighboring activity systems and consolidate the model concept.

The study focused on urban educare owners within low socio-economic townships in the Cape Town metropolitan area of South Africa as the *subjects* of the system. An initial sample of three educare owners in the Khayelitsha suburb of Cape Town were engaged. These accounts were supplemented and corroborated by four further educare owners from the Nyanga, Delft and Gugulethu suburbs of Cape Town. A total of seven educare owners were thus used to define the primary activity system of this study. The first educare sample participants were identified by consulting the Bertha Centre for Social Innovation and

Entrepreneurship. Once the first educare owner was identified, the two additional participants were identified by the first participant. The educare owner focus group participants were identified through The Business Bridge, a non-profit organization for entrepreneurship training in low socio-economic communities. These individuals were not related to the first group of educare owners and were not from the same townships.

The engagement with the educare samples identified wider participants who have the most contact with the educare activity system including educare teachers, NPOs related to ECD and local businesses. Representatives of each of these populations were identified through engagement with the educare owners. Further to the emergent nature of the study, a non-profit organisation without direct links to the ECD sector was identified and interviewed due to the potential relevance of their work to the educare sector.

It should be noted that no governmental representatives were engaged during the course of the study. The research revealed a very light engagement between government departments and educare owners. It also revealed the government's current strategy of leveraging the reach of NPOs in the field as a capacity extension for government service provision. Educare owners revealed that they initiate all contact with government inspectors and inspectors reinforce well-documented regulations during interaction. For these reasons and due to the constrained time-table for the research, state input into the definition of the educare activity system has been described through the NPOs who extend state service provision.

**Data Collection**

Data for this study, including both primary and secondary data, was collected between the months of September 2014 and November 2014. This data was collected through the use of individual interviews, participant observations and focus groups. The individual interviews conducted in this study were semi-structured. Due to the inductive nature of the research and the different activity participants interviewed, no single interview structure could be applied across all participants. Additionally, interviews conducted with the educare owners informed the development of the interview questions asked of other activity stakeholders. Individual interviews were conducted so as to define all the components of the educare activity system and the relationships between them (Engeström, 2000).

The semi-structured interviews were supplemented with two additional research instruments, namely: two focus groups and three participant observations. The focus groups were used for two different purposes. In the first instance, they were used to supplement and corroborate the data obtained from the educare owner interviews. This provided some evidence as to the validity of the semi-structured interviews. In the second instance, a focus group was used to explore the potential for the first alternative model design with educare owners. The three participant observations were conducted in Khayelitsha educares which yielded significant data for the identification of contradictions within the system.

Table 1 shows the profiles of the participants in this study.

Table 2: Profile of participants

| | Semi-structured Interviews | | | | |
|---|---|---|---|---|---|
| | **Respondent designation** | **Organisation name** | **Organisation type** | **Data Source** | **Reference** |
| 1 | Owner, Khayelitsha | Inkwenkwezi | Educare | Primary data | Educare session 1 |
| 2 | Owner, Khayelitsha | Ongama | Educare | Primary data | Educare session 2 |
| 3 | Teacher, Nyanga | Sunbeam | Educare | Primary data | Educare session 3 |
| 4 | Program director, CPT | Ilifa Labantwana | NPO | Secondary data | Non-profit session 1 |
| 5 | Field-work Co-ordinator, CPT | Ikamva Labantu | NPO | Primary data | Non-profit session 2 |
| 6 | Founder, DBN | SaveAct | NPO | Secondary data | Non-profit session 3 |
| 7 | Chief Executive Officer, CPT | Silulo | Social Enterprise | Secondary data | Related activity 1 |
| 8 | Owner, Nyanga | Sibu Cash Store | Spaza shop | Primary data | Related activity 2 |
| 9 | Owner, Nyanga | Kweni Cash Store | Spaza shop | Primary data | Related activity 3 |
| | **Focus Groups** | | | | |
| | **Participants** | **Focus topic** | | **Data Source** | **Reference** |
| 1 | 3 x Educare owners | Linking educares for capacity and accountability | | Secondary data | Focus group 1 |
| 2 | 4 x Educare owners | Basic challenges of educare administration | | Primary data | Focus group 2 |
| | **Participant Observations** | | | | |
| | **Facility** | | | **Data Source** | **Reference** |
| 1 | Mzamo Educare, Khayelitsha | | | Secondary data | Observation 1 |
| 2 | Inkwenkwezi Educare, Khayelitsha | | | Secondary data | Observation 2 |
| 3 | Ongama Educare, Khayelitsha | | | Secondary data | Observation 3 |

The primary data collected for this study was supplemented with secondary data generated as part of a related study (Drake, Khojane, Dutuma, Argyle, & Moller, 2014). The study collected data pertaining to the nature of the environment surrounding early childhood development centers in the urban, marginalized communities of Cape Town.

**Data analysis**

The educare owner interviews, focus group and participant observations were each recorded, transcribed and read closely to identify a common historicity for educare owners in the township. Close attention was paid to descriptions of interaction with tools and other activity participants to define the activity system around the educare owner. The texts were searched for clues of disruptions, tensions, frustrations, dilemmatic comments and patterns of the same experiential articulation across educares. Finally, interview transcriptions were compared with the observed environment and all departures from the interviews or academic literature on the space were noted.

The final analysis was facilitated through the use of a 6 x 6 matrix listing the six activity

system components along the edge row and column. Each component was broken into its constituent parts and individually and in pairs the components were analysed for contradictions and linked to relevant data excerpts (from the interviews, focus groups and participant observations).

**Research Criteria**

The qualitative nature of this research requires the consideration of the following qualitative research criteria:

- *Credibility* – The research made use of recognized methods of research (semi-structured interviews, focus groups and participant observations) and made use of a well-known and appropriate theory, namely CHAT, to guide the analysis of the activity systems of interest to the study). While this study has used a purposive sample of educare owners as the core data contributors for the study, this data has been supplemented with that of a group of educare owners who do not know the core group, did not know each other and did not operate in the same townships as the core group. This overcomes to some extent any limitations from not being able to use true random sampling. The use of varying methods (interviews, observations and focus groups) to extract richer data ensured some triangulation of data and further triangulation was achieved through engagement with a range of different participants (the first purposive set was checked against the second set of unrelated educare owners).
- *Transferability* – This is a particular challenge for qualitative studies and some scholars are of the opinion that such studies cannot be generalized beyond their specific contexts. To aid the determination of the extent of this study's transferability, detailed contextual information was provided beyond that presented in this limited paper.
- *Dependability* – Lincoln and Guba (1985) maintain that dependability is reinforced to a large extent by a demonstration of credibility. However, to make provision for a more direct demonstration of dependability, the operational process of the study should be captured in detail (Shenton, 2004) to enable future repetitions of the study by different researchers. To this end the research design and data collection methods have been described.
- *Confirmability* – The concern here is how closely findings are informed by the actual experiences of the participants rather than the subjective preferences of the researcher (Lincoln & Guba, 1985). Shenton (2004) claims that triangulation has a role to play in reinforcing confirmability in that it mitigates against the bias of the researcher and Miles and Huberman (1994) maintain that confirmability is reinforced by the extent to which the researcher is candid about any predispositions. For this study, relevant concerns regarding confirmability are summed up by the following specific study limitations:

    - It was apparent during observation that the presence of the researcher altered the nature of the space to the extent that energy and behaviour of those observed was changed in the educare. The analysis has relied upon triangulation of data from different unrelated sources to mitigate against this reaction.
    - In general, language was a limitation during this study. None of the local community participants speak English as their first language. This may have

affected the quality of the understanding of questions asked by the researcher who in turn could not speak Xhosa. Triangulation between different participants was used to mitigate against such linguistic challenges. Some participants in the second focus group were particularly shy and intimidated by the use of English. In an attempt to surface their voices, one of the participants with more confidence in the use of English was asked to translate the conversation for the group and the group was asked to speak freely in their preferred language. There was a risk that this data was tainted by the interpretation of the translator. As a mitigation against this, the recording of the focus group was played back to a Xhosa speaker to check the interpretations of the original translator.

## Results and Discussion

The research is described as a progression through the expansive learning cycle. The research produced voluminous data and the length limitation of the article precludes both the inclusion of extensive illustrative quotations and other supporting data and the description of the final stages of the model building which involved expanding the model to include the adjacent activity systems of spaza shop owners. At each step of the cycle, illustrative key findings are described. A brief definition of the activity system as it emerged through data analysis is given. Both primary and secondary contradictions which surfaced in the activity system are then listed and described. These findings were consolidated into the first iteration of a new social innovation model and the tertiary contradictions arising from the analysis of this model were identified. The second model iteration is then described, along with the related tertiary and quaternary contradictions.

### Step 1 – Describing the Activity System

The initial unit of analysis was the educare activity system. A partial description of three of the nine components of the activity system follows.

*Subject* - The educare owner is defined as the subject of the activity system and exists at the core of agency within the educare activity system. This actor defines the space for children, teachers and community and assumes a dualistic role of both surrogate parent and business owner. The subjects do not exhibit competitive behavior towards each other; to the contrary, they uplift each other in both financial and administrative capacities through their closest relationships with other educare owners. Taken in isolation, the educare owners have very little access to material resources; however, through their resourcefulness and resilience a pattern of interaction with an informal support network is present among educare owners; which may take the form of access to information, land acquisition, capital for infrastructural development or financial security through community. Whilst the trust capital required to maintain these relationships is not shared widely, educare owners exhibit high levels of trust through interactions in close pockets of social capital. Thus, collective assets play a central and crucial role in the existence of the individual educare and the success of the subject as an educare owner.

*Object* - All efforts and actions in the activity system are applied to the development of the educare centre. The nature, however, of this development is ceremonial and thus not a direct development of the capacity of the educare. The educare is primarily a symbol of pride and success for the owner and it defines and projects the stature of the owner within the community.

*Community* - The activity system participants who share an interest in the object include: children, teachers, cooks, other educare owners, parents/guardians, and *spaza shop* owners (A spaza shop is a micro-retailer that sells basic foods and necessities to a local community. Spaza shops do not generally operate with a formal trade license), NPOs and various State departments.

*Outcomes* - The subject's actions on the object appear to be for three different outcomes: for respect in the community, for financial security and for the creation of a safe place for children. Of these three, the generation and conservation of social capital through respect appears to form the most substantial portion of the motive for action. The ceremonial actions applied to the educare center facilitate access to these outcomes.

**Step 2 – Analyzing the contradictions**

**Primary contradictions (i.e. within components).** Seven primary contradictions were found. Article length permits only the first two primary contradictions to be discussed.

*Primary contradiction 1 - Subject*: The educare owner assumes a conflicting role of both surrogate parent and business owner. This is a powerful primary contradiction which plays out in the activities and motives of the educare owner. On one end of the responsibility spectrum, the educare owner provides a critical service to a community which does not have the wide familial support networks of many rural areas.

The owner's role as a surrogate parent is also tightly linked to their stature in the community as a respected individual. This important link between the role of the surrogate parent and access to social capital conflicts with the subject's need for financial security in her role as a business owner.

*Educare owner*: We cannot turn the children away. This is why we are having so many children in this place, more than the 50 allowed. It is difficult because the children are safe here, it is safer than to leave the child alone in the house or on the streets where they can be hurt by bad people. So we say: 'Ok, you can bring them here' but then there is small space and the Department will not pay for them in the small space. But then we need the parents who can pay something so that we can feed all the children. It is very hard.

*Primary contradiction 2 - Object*: The educare, as the object, represents both a physical custodial facility for children and a projection of the owner's stature in the community. Here the contradiction lies in how the object is framed by the owner because the way that the object is perceived by the subject, will affect how the subject interacts with it (Engeström, 1991). The custodial facility framing encourages an internalized development of the space for the sake of the children. The framing of the object as an extension of the owner's stature encourages externalized image development of the facility for the sake of the owner and indirectly for the children. A reinforcement of the owner's stature through the educare means reinforcing the symbols which will allow the community to perceive it as successful and respectable. Increased community stature means greater access to social capital and, in an environment where collective assets are critical for survival, this is an operational imperative.

**Secondary contradictions (i.e. between components with an activity system).** Analysis of the secondary contradictions in the activity system revealed the depth to which primary

contradictions affect the system when the components interact with each other. One of the two secondary contradictions discovered is discussed.

*Secondary contradiction 1 - subject and tool contradiction*: Tools mediate the nature of the actions applied by the subject to the object. Most of these tools (e.g. documentation of child progress, financial management, governance structures and ECD training) have been designed by the State but lack contextual relevance. This gap emerges because tool design is based on a best-practice definition borrowed from mostly Euro-centric, middle-class contexts. In the few studies which exist in this sector (Atmore, 2012; Unicef, 2005; Williams et. al., 2001; Richter, 2012), facilities are defined almost entirely by such deficits and the progress they have made in their corrective actions to bridge them. The result of this gap in contextual relevance is that the subject re-engineers the tools to align the outcome of the actions applied to the educare with the unchanged motives for the action. The state's onerous and contextually misplaced registration toolkit, designed to bring the educare closer to the best-practice definition, is re-engineered to a ceremonial compliance toolkit to maintain access to the subsidy. This is evident in the following excerpts:

*Educare center observation*: Patricia has created small portfolio folders which reflect a collection of the individual art creations of the children. There are certainly fewer collected pieces in the portfolio than the number of children in the class and they appear to be from a single art activity conducted on one day this year. The template for capturing individual learning progress is neatly filled-out but it exhibits the same deficiency in terms of the number of children listed (Observation)

*Educare owner*: We have got a governing body for the educare but this is just something that Social Services wants to see. It does not help us, my friend is the chairman but she does not do anything, she is just signing so that I can have access to the money for the children. The government wants this to prove that we are not taking money and buying cars and shoes.

A strong theme of ceremonial compliance emerged which reinforces the importance of ensuring that the space is perceived to be a compliant facility – in order to both secure access to State funding and to ensure community for credibility and access to social capital.

**Summary**

Most of the contradictions identified are directly linked to the fragmented, highly administrative but low sector contact relationship which exists between the State and educare centres. Collective assets are at the core of the educare facility's existence and sustenance. However, the system engages with the educare center on an individual basis which, in its individual capacity, has very low resources for development. Furthermore, policies now articulate the myriad deficits of the educare center meaning that dependency upon the system for development is induced in the educare. When these two components (current ECD legislative / administrative system and educare center) engage, they generate and reinforce two major conditions: ceremonial compliance (which holds existing registered educare centres captive to a ceremonial cycle of conformity to ill-fitting minimum standards) and a dependent need-state.

Of particular importance, in terms of defining an alternative model, is to note the characteristics of the system and the educare centre:

• With its high fragmentation and poor resources, the state-designed system has high institutional inertia. For all its policy development and task allocation, the state system is relatively static and relies upon the incentive of the subsidy system and NPOs to stimulate action in the educare centres.

• Educare owners exist in pockets of social networks with rich social capital in terms of trust, financial, emotional and administrative support. These networks are informal and are used as a tool to most effectively traverse the complexities of the explicit regulations in search of desired outcomes. This behavior represents a deviation from the implicit norm of externalized agency as educare owners interpret the reality forced upon them and seek creative solutions to survive it.

• Educare owners are creative, resourceful and use limited resources very efficiently.

At this point, the study moved on to the next phase of the expansive cycle: using the analysed contradictions to formulate a new model of interactions within the activity system.

***Step 3 –*** **Formulate an alternative model and assess its impact**

***First iteration of an alternative model.*** The first iteration of an alternative model described a reconceptualization of the object of the activity system. Instead of an isolated framing of the subject's educare centre, the model re-conceptualizes the object as a group of educares. This reconceptualization is facilitated through the formation of small formalized educare support groups between educare owners. Data on the cultural-historical practices of the owners revealed a pattern of stokvel involvement by owner participants in their personal capacity (A stokvel is an informal savings pool or syndicate in which funds are contributed in rotation and withdrawn either in rotation or as lump sums).

This model leverages trust capital amongst the members and close societal pressure to ensure accountability and integrity within the group. So effective are these social accountability structures that stokvels are characterized by very low default rates (Mashigo & Schoeman 2012).

The alternative model design combines no more than five educares together to form an educare stokvel which seeks to: release dependency on the State, internalize agency in a formalized manner and break the cycle of ceremonial conformity to minimum standards. This is achieved through the reconceptualised object and an additional motive: greater access to resources. The stokvel can facilitate lump sums of cash being channeled towards the most pressing needs of a particular member.

The model has the added benefit of providing an accountability system at the grass roots which is actually relevant and designed by the group for its needs. The stokvel should also include educare centres at various levels of development, including newly formed centres, thereby stimulating growth for the sector. Underscoring all of this is that the zone of proximal development is not too wide, as this stokvel mechanism is already familiar to educare owners.

**Second iteration of an alternative model.** A search for deeper capacity was the departure point for the second iteration. This process began by investigating the aggregated collective assets of the educare stokvel for unrealized potential. The results of this investigation

suggested that more than 600 people can be closely linked to a stokvel of five educare centers with a monthly expenditure of almost R240 000 on food by the 600 individuals closely linked to the educare stokvel. This is a significant economic activity system which neighbors the educare stokvel and one which can be leveraged to build capacity in the stokvel.

The second iteration widens the shared-value concept through reconceptualization of the object to the community in which the stokvel is embedded. The power of this model lies in the fact that it aggregates pockets of high trust capital together to generate a group-buying network. This in turn generates high purchasing power and the capacity to hold itself accountable to each other through trust relationships. With volume orders and an aggregation of purchasing power, a buying platform would be well-positioned to establish partnerships with basic food product suppliers at discounted prices. More importantly, the platform would be positioned to extract a sales fee from suppliers with a percentage of this channeled back into the related educare stokvel. In Figure 1 below, the model resulting from the second iteration through the expansive learning cycle is shown.

Figure 1: Impact points of alternative model

1. The individual educare is reinforced by the immediate support and accountability structure of the educare stokvel. The existing access to social capital is complimented with access to an alternative funding source from the group-buying network.
2. Through the educare stokvel, educares engage with the State system collectively as opposed to individually.
3. Collective engagement means that the stokvel enters the engagement from a position of bolstered power through the bolstered collective assets underpinning the educare.
4. The constraint of dependency on the system begins to be alleviated as the educare is reinforced with the capacity to assume more agency in development.

5. By engaging with higher internal capacity and agency, the educare is more equipped to develop the educare beyond the desperation of ceremonial compliance.
6. The broader collective assets of the educare stokvel can alleviate the critical impact of weak State support and unreliable subsidies. This reduces the survivalist nature of the center and reverses the need-state, both of which perpetuate the status quo.
7. The educare is given the boost required to scale the high barrier to entry into the formal system by achieving the minimum state requirements.
8. The documented progress of the educare stokvels through this platform accumulates institutional mass through granular data and membership. Institutional mass can exert pivotal pressure on State bodies for an alignment of State with the actual needs of the sector: a move from a need-state to a demand-state.

This model is founded on an integration with the neighboring *food-acquisition activity system* in marginalized communities. The relational design of this model had to be tested against an investigation into the components of the food-acquisition activity system.

**Tertiary and quaternary contradictions.** The operations of the alternative model raised two new tertiary contradictions with the existing system and a quaternary contradiction with a neighboring activity system. The new tertiary contradictions include:

- *Increased administrative burden:* A formalization of the stokvel will come with its own administrative labor division. However, taking responsibility for the collection of orders and distribution of food orders will more than over-tax educare owners, it will change their primary role.
- *Risk of affecting the surrogate-parent role and perception of the owner by the community:* The educare owner runs the risk of losing credibility in the eyes of the community if seen to be profiting off the expenditure of others. This runs a risk of isolating the educare owners from the community and such a relational severance would devastate the trust-capital foundation of the model.

If an alternative model of interaction is to gain traction, it must not assume that trust capital can be translated and extended beyond the boundaries of its meaning and relevance between individuals and groups. The study of both the educare and spaza dynamics reveals that trust is a very complex relationship between people and it is the key to accessing collective assets both for educare and spaza owners. The alternative model can be more effective if it leverages and aggregates trust relationships in their existing form in the community and does not seek to re-engineer them or force them on any individuals. Through a study of the contradictions raised and the dynamics of the spaza activity system, the social innovation model was realigned as the final process of this expansive cycle. Figure 2 illustrates the relationships and operational flows of the resultant, consolidated social innovation model, followed by a brief description of each component.

Figure 2: The consolidated social innovation model

1. The model still has its genesis in the educare stokvel of five educare centres. These individuals select each other and administrate their stokvel according to their co-created constitution. Each member of the stokvel selects a local trusted spaza owner with whom to partner. The educare stokvel initiates the ordering process by placing orders for educare groceries with their spaza partner. This is either placed through cash or credit or a combination of the two depending on the relationship between the two.
2. The spaza partners all register on the group-buying platform under their linked educare stokvel. They place the e-commerce order for their educare patrons as well as their own stock orders.
3. The orders are aggregated by the platform and sent to regional retail supplier partners.
4. A sales agreement between the platform and the suppliers extracts a sales fee from the supplier based on volume purchased.
5. A portion of the sales fee is directed to the linked stokvel account and to the relevant spaza owner. The importance of this capital to the educare stokvel has been established. Likewise, the fee-share with the spaza partner encourages participation and rewards it while adding a further boost to their tight cash flow balance. The balance of the sales fee is recirculated into the platform for operational growth.
6. The supplier makes the discounted products available to the spaza owners either through delivery to a local collection point or through self-collection by the spaza owner.
7. The spaza owner then distributes the ordered groceries from the local shop location and sells generally to the community at more competitive prices. At this stage, the educare owners become indirect marketers for the system by encouraging their parents/guardians to use the local spaza for the benefit of supermarket prices local to their community.

## Conclusion

South African educare owners in socio-economically disadvantaged communities are people who both individually and collectively continue to survive against great odds. At the core of the final social innovation model lies a substantiated faith in the capacity of these actors to

know their own business and needs. It has been a telling discovery through this process that each evaluation of the model demanded an expansion of the concept of shared-value to align it with its environment. In as much, this study has described a pattern of expanding social inclusion where contradictions lead the evolution of the model design. The product of this study is a model for improved access to resources. It does not dictate to educare owners what best-practice in their environment is nor how they should realize it. It does not concern itself with improving the entrepreneurial or business administration skills of the spaza owner. In its final form, the model provides only one service (or social practice): access to capacity and access to relevant and enabling accountability. This study has provided only an introduction to the resultant social innovation model. The study outcome revealed that a partnership with spaza owners holds tremendous potential for capacity-building in the educare sector as well as for the sustainability of spaza shops. Subsequent research into the dynamics of the spaza activity system and the potential for organized integration with retail suppliers, both logistically and via a technology platform, was undertaken and the resultant social innovation model attracted start-up funding and has been implemented.

The researchers found CHAT to be a highly effective approach in understanding the rich historicity and socio-cultural factors within the South African urban educare sector. Most importantly to the success of any social innovation, the use of CHAT proved itself as a powerful tool in surfacing important contradictions, such as the deviation from the institutionalized pattern of dependency in this environment and led to a model that deviates from any preoccupation with deficits to uncover existing, profound assets and capacities embedded within the community. This is a critical requirement if the educare is to traverse the zone of proximal development towards the conceptual ideal. Any solution based on deficits without a view on existing capacity will have no measurement of how wide the zone of proximal development is for the solution. Perhaps the most positive outcome from the insights the use of CHAT gave, and which informed the final social innovation model, is the fact that participants will be exposed to incremental evidence of the existence of their own agency.

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# IMPROVING THE MANAGEMENT OF CURRICULUM IMPLEMENTATION IN SOUTH AFRICAN PUBLIC SCHOOLS THROUGH SCHOOL LEADERSHIP PROGRAMME: A PRAGMATIC APPROACH

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## Abstract
The School Management and Leadership Development Programmes rolled out as an Advanced Certificate in Education-School Management and Leadership (ACE-SML) programme by the Department of Basic Education in partnership with Universities has resulted in a positive impact on performance of schools and learners through improved management of curriculum implementation. The purpose of this study was to evaluate the impact of this ACE-SML school leadership programme on the management of curriculum implementation. A mixed methods approach with case study research design was adopted wherein semi-structured interviews were conducted on ten school principals, ten deputy principals, and thirty heads of departments who were purposive sampled from ten public secondary schools. Survey questionnaires that composed of the mixture of closed and open-ended questions were administered to fifty research participants. Content analysis and narratives were used to analyse data from interviews and survey questionnaires. The study reveals that the capacity of the programme to transform curriculum management and implementation practice and culture benefited teachers and learners. This impact was observed through improved performance of rural schools and learners in compromised learning conditions characterized by shortage of the new curriculum textbooks, stationery and other material resources; loss of experienced teachers due to redeployment and rationalisation processes; and minimal support from parents and community. In spite of the fact that the school managers were well-grounded on curriculum management and implementation, their work is made difficult by externalities that each school principal has little or no influence over. Therefore, the study recommends continuation of the SML development programmes to cover other school management team members.

**Keywords:** school leadership; curriculum management, curriculum implementation; redeployment and rationalisation process; school externalities

## Introduction and problem statement
A school curriculum provides a formal blue-print of what learners ought to learn and what gets taught. A curriculum that is rich and diverse, demands school managers who are able to adapt its pacing, pitch it at appropriate grade levels for challenging learning experiences and provide support for its implementation (Tomlinson, 2005, p.160). The South African curriculum is aimed at the development of skills, knowledge, attitudes, competencies and values that aim to transform learners into better citizens who better understand their position in becoming scientists, technologists and entrepreneurs who participate in the country's and global economic activities (Department of Basic Education [DBE], 2011, p.5). Furthermore, 'the good intentions of DBE were fully captured when it highlights that the education system will play a greater role in building an inclusive society, providing equal opportunities and helping all South Africans to realise their full potential, in particular those previously disadvantaged by apartheid policies, namely black people, women and people with disabilities predicted' (DBE, 2014, p.1). However, the results are not as proclaimed in the

curriculum statements. School principals are challenged to create the climate, structures and practices for academic success of *all* students (Villarreal, 2014, p.1). This hiatus between intentions and realities begs the question: what are the primary causes of poor performance of learners in South African public schools?

The attainment of the outlined educational outcomes above was not possible because of many reasons. The primary cause emanates from the type of education system which prevailed in South Africa after the inception of apartheid until the dawn of democracy (Smuts, 2014). Differences in curriculum and education systems in South Africa led to curriculum reform as a means to address the disparities caused by apartheid (Tshiredo, 2013, p.2). Democracy brought along a chain of curriculum changes, from Curriculum 2000, to Revised National Curriculum Statement, National Curriculum Statement and currently the Curriculum and Assessment Policy Statement in use today. The introduction of new curricula in South Africa has been a challenge to many practising teachers who received Bantu education (Lovemore, 2013), and the continued changes resulted in despair amongst many of them. The limitations in teaching capacities faced by many black teachers are a result of what was engineered in 1950 by Hendrik Verwoerd (Smuts, 2014). This caused South Africa to be rated as having one of the worst school systems in the world, a result of a well-tailored education bureaucracy that was designed to fail black South African learners and prepare them only for menial labor (Smuts, 2014). There was a need in post-1994 to re-design education to accommodate all South Africans. Despite pitfalls in curriculum management and implementation, curriculum reform represented a strong break from previous arrangements and sought to advance critical thinking and problem-solving amongst learners (Berg, Taylor, Gustafson, Spaull & Armstrong, 2011, p.1). The legacy of apartheid tailor-made education still prevails in the 21st Century and has had deleterious effects that cripple South African public education. The research reveals inefficient instructional supervision; teachers' lack of commitment; lack of pedagogical skills; inadequate material and facilities as primary challenges faced by school managers (Onojerena, 2015, p.1).

In the midst of these challenges, teachers are required to offer a solid curriculum as stated by Tomlinson (2005); Berg et al. (2011) & DBE (2011) above without deviation. In spite of the fact that the aftermath of curricular reform has become a challenge to global communities, South Africa has been hit hard. Watermeyer (2012, p.1) portrays South African conditions that make curriculum reform a challenging activity when he highlights that articulating and aligning the curriculum is a complex and time-consuming endeavour, requiring the cooperation and collaboration of teachers, educational managers and regulators. His study further reveals that synergies of this nature may however not always be forthcoming because of individual autonomy, issues of capacity and infrastructure.

The challenges stated above make the role of school managers regarding managing and leading curriculum implementation extremely difficult. The problem is perpetuated when intervention programmes similar to ACE-SML do not attain intended outcomes of promoting instructional leadership (Naidoo & Petersen, 2015, p.371). The role of instructional leaders is to manage and lead curriculum for its effective implementation. If this area was just brushed over during programme implementation, when it is crucial in promoting the performance of learners, then the intervention programme outcomes become questionable. Since the curriculum provides basics for core schooling, which is teaching and learning, the skewed curriculum management and implementation affects learner achievement negatively. The

major challenge facing school managers is how best the curriculum could be implemented to reach its intended beneficiaries.

In 1996, two years after democracy, South African education was shaped by ethos, systems and procedures inherited from the apartheid past that was characterised by inadequate supply of teachers, low teacher qualifications and other resources and poor morale of teachers (DBE, 1996, p.18). In 2012, 17 years after democracy, South African schooling system was partitioned into two visible education systems, namely, dysfunctional (75%) and functional (25%) (Spaul, 2012). Spaul (2012) identifies factors characterising dysfunctional schools that compromised management of curriculum implementation and teaching and learning. These factors include weak management accountability; incompetent school management; lack of culture of teaching, discipline and order; inadequate LTSM, weak teacher content knowledge; high teacher absenteeism; slow curriculum coverage with little homework and testing, high repetition and drop-out; and extremely weak learning. In an attempt to transform schooling in South Africa, the DBE made explicit its belief that effective leadership and management, supported by well-conceived needs-driven leadership and management development, are critical for the achievement of educational goals (Government Gazette No.37897 2014: 2). A belief was made in 2007 when universities in South Africa started rolling out the ACE-SML programme. In its endeavour to provide quality education to all South African learners, school managers underwent school leadership training and development. Eight key areas identified in the South African standards for principalship (Government Gazette 2014, p.2) were addressed, namely, people leadership; physical and material resource management; school mission and vision; staff development, managing school as learning organisation, parent involvement; community involvement; curriculum and extra-curriculum management. The focus of this study is on the impact of ACE-SML programme on curriculum management and implementation. The study aimed to answer the following questions:

1. What is the impact of ACE-SML programme on the management of curriculum implementation?
2. What are the challenges experienced by school leaders and managers in curriculum management and implementation?
3. How should management of curriculum implementation competencies be developed within school leadership programme?

**Theoretical framework: A pragmatic approach**

In this study pragmatism was selected as a theory that provided foundations on how the improvement of the management of curriculum implementation in South Africa through School Leadership Programme could be studied and evaluated. Pragmatism is a theory that undergirds beliefs and ideas that are true, workable and beneficial to transformation (Stanford Encyclopaedia of Philosophy, 2008). Trahan and Steward (2013, p.59) support Creswell and Clark (2007) when they argue that pragmatism focuses on the problem in its social and historical context. The four most important characteristics of pragmatism that are relevant and applicable to this study are outlined by Evans, Coon and Ume (2011, p.267-269). Firstly, pragmatism influences our actions, methodologies and our world views in addressing our values and epistemologies. Secondly, action and reflection are inherent in pragmatism. Thirdly, pragmatism provides knowledge that satisfies disciplinary practice because it aims to transform and improve individuals' daily lives. Lastly, pragmatism allows knowledge creation and production. Pragmatism provided philosophical, theoretical and methodological

underpinnings used to evaluate of impact of ACE-SML programme on curriculum management and implementation in South Africa.

## Methodology

### Approach and design

A mixed methods research approach (MMRA) with case study research design was adopted in this study. An evaluative nature of this intervention programme was best understood through blending qualitative and quantitative approaches. MMRA allowed the research to tap into benefits of having multiple sets of data that were collected using different research methods. Furthermore, the research drew strengths from each data collection instrument and data analysis methods; and simultaneously address each other's' weaknesses (Johnson & Turner, 2003).

### Population and sampling technique

Ten public secondary schools in Mopani Education Districts, Limpopo Province were purposively sampled based on the size of the school and their participation in the ACE-SML programme. Ten school principals, ten deputy principals, and thirty heads of departments were purposive sampled from each case school. In purposive sampling the choice of sample was based on the basis of knowledge of a population, its elements and the purpose of the study (Babbie, 2010, p.193). A purposive sampling was used in this case study design to select sample based on the stated criteria.

### Instruments

Semi-structured interviews were conducted on research participants at the school site. This research instrument was used to establish rapport and ask the interviewee a series of questions (Johnson & Burke, 2000). Survey questionnaires that composed of the mixture of closed and open-ended questions were administered to fifty research participants. The survey questionnaire allowed the researcher to construct a self-report data collection instrument that was filled out by the research participants (Johnson & Burke, 2000). Semi-structured, individual interviews were first conducted with ten former ACE-SML principals at their school sites for about forty-five minutes. The aim was to find information on the impact of the ACE-SML programmes on the management of curriculum implementation. The interviews were followed by administration of survey questionnaires to 50 SMTs, including ten principals who participated in the interviews. All the questionnaires administered were retrieved.

### Trustworthiness of research instruments and findings

In this study triangulation was used to achieve data validity and reliability. The use of three triangulation methods, namely, respondent; method; and data were to ensure that instruments and data validity were achieved. In this study, triangulation was not aimed merely at validation but at deepening and widening the researcher understanding of the research problem (Olsen, 2004, p.1, Yeasmin & Rahman, 2012, p.2219).

## Findings

Content analysis was used to analyse data from interviews and questionnaires. Narratives extracted from interviews were used to clarify and substantiate data presentation and interpretation. Data presentation and discussion was done using the following codes: school principals (P); deputy principals (DP); head of department 1 (H1); head of department 2 (H2);

head of department 3 (H3). Six key findings were identified from interview and questionnaire data; namely better curriculum management; better-quality teaching and learning; shortage of CAPS, stationery and other material resources; loss of SMTs and teachers through redeployment and rationalisation (R & R) processes; minimal or lack of support from parents and community; and compromised conditions of work. Interviews provided baseline assessment for survey questionnaires because the questions raised in the survey questionnaires were meant to address eight key findings that emerged from interviews. Presentation and discussion of data from the two methods was dome simultaneously in order to achieve better understanding of each key finding. Below is a summary of data gleaned from survey questionnaires.

***Table 1: Data presentation from questionnaires***

| **SMT** | **Principals (P)** | | | **Deputy principals (DP)** | | | **HOD 1 (H1)** | | | **HOD 2 (H2)** | | | **DOD 3/ Senior teacher (H3)** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **A** | **N** | **D** | **A** | **N** | **D** | **A** | **N** | **D** | **A** | **N** | **D** | **A** | **N** | **D** |
| **Better curriculum management** | **10** | **-** | **-** | **10** | **-** | **-** | **9** | **1** | **-** | **9** | **-** | **1** | **10** | **-** | **-** |
| **Better-quality teaching, learning and assessment** | **9** | **1** | **-** | **10** | **-** | **-** | **9** | **1** | **-** | **10** | **-** | **-** | **10** | **-** | **-** |
| **Shortage of CAPS textbooks, stationery and other material resources** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** |
| **Loss of SMTs and teachers through R & R processes** | **8** | **-** | **2** | **8** | **-** | **2** | **8** | **-** | **2** | **8** | **-** | **2** | **8** | **-** | **2** |
| **Minimal or lack of support from parents and community** | **10** | **-** | **-** | **9** | **-** | **1** | **9** | **-** | **1** | **9** | **-** | **1** | **8** | **-** | **2** |
| **Compromised conditions of work** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** | **10** | **-** | **-** |

Table 1 above captured the data from questionnaires. A Likert scale was used with A representing agree, N, no comment and D disagree. 50 SMTs responded to the questionnaire with ten principals, ten deputy principals, ten HOD 1, ten HOD 2 and ten HOD 3. Data from the above stated research participants were summarised and captured in the table above. Data reflect that 96% of the participants agreed that the programme resulted with better curriculum management; and better-quality teaching, learning and assessment in their respective schools. Furthermore, 100% of them indicated shortage of CAPS textbooks, stationery and other material resources and compromised conditions of work as factors that inhibit quality management of curriculum implementation. 80% of participants indicated that loss of SMTs

and teachers through R & R processes dearly affected their management of curriculum implementation whereas, 90% of them indicate that minimal or lack of support from parents and community has negative impact on their management of curriculum implementation.

**Better curriculum management and implementation**

Education ministries across the globe strive towards better curriculum management and implementation. Leithwood et al. (2004, p.1) contends that effective leadership makes a difference in improving learning. They further identified three primary functions of high quality school leaders as setting directions and establishing high expectations; developing people by providing necessary support and training; and making organization work by promoting the culture of teaching and learning. The participants in this study agreed that ACE-SML programme added value to their curriculum management and implementation practices. Participant P3 highlights: "*I received good foundations to curriculum leadership and management which I never have before from ACE-SML programme, and I was able to transform curriculum management and implementation in my school*." Participant HoD 3 contends that *'I am a better curriculum leader and manager in the school because of ACE-SML programme. Before training, I felt too much overload because of lack of planning, knowledge and skills. Today, my job is easy. I know what, how and when of leading and managing curriculum implementation'.* This was reinforced during survey questionnaires when all principals, deputy principals, and 93.3% of HODs confirmed that ACE-SML programme brought better curriculum management. However, the South African situation makes the job of school managers difficult. Despite HoDs clear curriculum responsibilities, they are expected to cover several learning areas; some of which are not their own specialist subjects (Bush et al. (2010). The schools that perform better than others were reflected through their school curriculum management school documents. The more the activity and plans were put in place, the more chances of greater student achievement. Leithwood, et al. (2004, p.1) principles are apparently working in seven of the schools in this study because such schools adhere to setting directions; developing people; and making organization work. This is the sole responsibility of SMTs and HODs in particular.

**Better-quality teaching, learning and assessment**

Teaching, learning and assessment are core areas of schooling. In this area, pedagogical and instructional leadership need to focus on leading the teaching and learning; setting learning objectives and curriculum development (OECD, 2013, p.523). Participants in this study were convinced and confident that they were well-positioned to promote pedagogical leadership in schools through ACE-SML programme. Participant P1 states: *"The programme helped me to understand the value of developing and implementing school policies, particularly, curriculum implementation policy. The curriculum policies which we formulated were ranging from curriculum implementation; academic performance improvement; assessment; moderation; monitoring policies and subject committee policies. These policies are backed-up by learners-at-risk policy that covers vulnerable and orphaned learners, learners with behaviour problems and learners with special educational needs and challenges".*

Data from questionnaires revealed that principals, deputy principals and 96.7% of HODs are convinced that ACE-SML school leadership programme provided adequate capacities on SMTs to provide better-quality teaching, learning and assessment. The study by Matthews, 2009, p.13), reveals that the curriculum leaders in high performing schools were distinguished by their active oversight and co-ordination of the instructional programme as

shared instructional leadership. Matthews, (2009, p.13) further contents that such instructional programmes involved co-ordinating the curriculum; conducting classroom observation; giving subsequent feedback; staff discussions of teaching and learning problems; controlling staff monitoring of student progress, using test results to improve learning programmes.

**Shortage of CAPS textbooks, stationery and other LTSM**

The schools in this study were supplied with adequate stationery, but CAPS-aligned books and other LTSM were still a great challenge to schools. Eight of the schools were found to be having challenges of non-supply or inadequate supply of Geography, Life Sciences, Mathematics, Physical Science and Accounting textbooks. Participant P8 states that: *"Since CAPS was introduced in FET band, we were never allocated books that cover our students. We had one supply which was not covering our students, and since then we were making applications to Circuit offices, and all in vain. This issue made us to call parents meeting wherein we agreed that parents should buy books to supplement what we have. They agreed and their children are succeeding. Otherwise, it would have negatively affected our Grade 12 results, if we did not respond promptly and pro-actively to such situation*."

Data from questionnaires as displayed in Table 1 above indicates that 100% SMTs agreed that this category is not receiving attention. In 2007, South African learners were not getting adequate access to learning material (Spaull 2012, Moloi & Chetty, 2010). The problem of textbook shortage was extended to secondary schools, which culminated in the 2012 textbook debacle and scandal in Limpopo Province. In this particular instance, the Department of Justice and Constitutional Court was involved in investigating associated problems because of the crisis in 2012 non-delivery of learner and teacher support material including textbooks in Limpopo Province (2014, p.9). The judgement found a major problem which lay in the lack and inability on the part of the DBE to monitor the delivery of textbooks in provinces; failure to maintain an accurate database, and poor procurement and delivery (Department of Justice and Constitutional Court, 2014, p.9-10).

**Loss of SMTs and experienced teachers through R & R processes**

South Africa experiences high teacher attrition and turnover that ultimately affects human resources capacitation than before because of multiple factors. Scholars such as Berry, Smylie and Fuller (2008) and Horng (2005) believe that high teacher attrition and turnover is the result of poor conditions of work that encompass low salaries, substandard working conditions, stressful itineraries due to continuous changes in the curriculum and overload as a result of increased administrative demands. This study reveals that the redeployment and rationalisation process emanating from school post establishment has a perceptible impact on teacher attrition and turnover levels. Excess deputy principals, HODs and teachers are shifted from one school to another due to demand and supply requirements of schools. The district and circuit management are responsible for shifting teachers from one school to another.

Participant P3 states that *"I was terribly affected by R and R process where two of my HODs and 2 teachers were taken from my staff roll. This led to [a] drop in results with Grade 12 being negatively affected*." And more often than not, schools and affected teaching personnel are not consulted. From table 1 above, 80% of respondents indicated that they were negatively affected and this transfer of teachers. The managerial posts previously occupied by transferred HoDs leave a school vacuum that creates a challenge on the management of

curriculum implementation. Participant DP7 highlights that *'R and R process has taken away the deputy principal, two HoDs and two teachers because learners' roll dropped drastically in the past three years, from 598 learners in 2012 to 341 learners in 2015. The HoD for commerce and languages were in excess and were transferred to other school. Our school qualified for only one HoD for Mathematics and Sciences. My HOD1 and myself, were only left at managerial posts. Management of curriculum implementation load was added to my daily management; administration; and governance load and feel I am overburden. Apart from deputy principal and HoDs, the school lost three of the experienced and committed teachers through R and R processes.* The R and R process has dearly affected 80% of schools as reflected in table 1 above, that participated in this study.

The transfer results with high loads of curriculum management by SMTs who were left behind. More, often than not, HoDs were subjected to management of curriculum implementation of certain subjects with little specialised knowledge (Bush and Glover 2016). According to Jansen (2003, p.31) the transfer of teachers in South Africa was achieved with great prize that involved loss of skilled teachers; teachers' resistance to redeployment and resistance by schools to hiring teachers from the excess schools. To add to this list, this study reveals that schools with teacher excesses are hit hard, because of loss of curriculum management and implementation's expertise that has implications towards effective management of curriculum implementation; and performance of schools and learners. In another study conducted by Luscheit and Chudgar (2015, p.3) for UNESCO, it was found that teacher shortages and resource constraints have been among the primary challenges facing educational systems in developing countries over the past two decades, specifically in South Africa.

**Minimal support from parents and community**

The SMTs and teachers acknowledge that engaging parents and family members in their children's educational lives is crucial towards their success in school and everyday life (Carrasco & Campbell, 2010, p.3, Terzian & Balwa, 2009). Participant P6 discloses that "*despite the fact that education is a stakeholder profession, many schools, like we do, still battle to find parents and other elderly community members actively participating in their children's and the school's affairs. Parents do not to care much about [the] education of their kids, and as such fail to give adequate support. The support was required from parents to help track their children's progress, help in completion of assignments and assist in providing basic literacy skills to their children*." 90% of respondents confirmed that there is minimal support from parents and the community. These schools which are situated in deep-rural Mopani district of Limpopo Province experience a serious challenge that needs special attention. If parents have lost hope or do not value education, this definitely affects the achievements of their children in school.

**Compromised teaching and learning conditions**

The compromised teaching and learning conditions make schools fail to attract and retain qualified teachers (Horng, 2005, p.1). This study further highlights that poor working conditions, such as unclean and unsafe facilities, poor administrative support, large class sizes, insufficient resources for students, and school policies made without teacher participation discourage qualified teachers from working at some of the rural schools in the Mopani District. In a similar study, teachers' working conditions refer to teacher salaries and benefits, class size, and internal transfer policies (Berry, Smylie & Fuller, 2008, p.1). If the

stated conditions are compromised, then the expectation is compromised learner achievement.

The compromised teaching and learning conditions in South African black schools cut across all school types such as schools in rural, semi-urban and urban and former Community and Model-C schools. South African public schools still display the inadequacies of systems created before 1994, despite 22 years of democracy which crafted and implemented policies aimed at addressing disparities and backlogs in schools. Participant P9 states that "*teaching and learning conditions are compromised due to shortage of human and material infrastructure. The most worrying part is lack of material infrastructure which results with overcrowded classrooms due to shortage of classrooms. Shortage of human, material resources and infrastructure cripples public education of the South Africans. The schools were operating in the absence of library, laboratory and computer equipment and facilities, and yet teachers are expected to produce responsible and independent learners who displays knowledge and skills in entrepreneurial, science and technological*." 100% of respondents to the questionnaire indicated that they are working in compromised teaching and learning conditions.

**Conclusions and recommendations**

The study concludes that managing curriculum implementation is a requirement for improved performance of schools and learners because it impacts directly the core duties of the school, namely, teaching and learning which core duties of the school are. ACE-SML programme assisted in curriculum management and implementation through the capacitation of school leaders and managers with specific reference to formulation and implementation of curriculum-related policies such as curriculum implementation, academic performance improvement, assessment, moderation, and monitoring policies. Schools found it necessary to have policies to back-up their operational and action plans. In spite of the fact that the school managers were well-grounded on curriculum management and implementation, their work is made difficult by externalities that the school principal has little or no influence over. Such externalities are shortage of CAPS, stationery and other material resources; loss of SMTs and teachers through redeployment and rationalisation (R & R) processes; minimal or lack of support from parents and community; and compromised conditions of work. Schools awaits parents support on tracking their children's progress, help in the completion of home works and projects, and collaborate with teachers in providing basic literacy, numeracy, and life skills to their children. The study recommends that a programme on 'managing curriculum implementation' should be rolled out to all school management teams. This programme should encompass instruction, learning, assessment, moderation, monitoring and results analysis for school improvement. School management and leadership (SML) programme should be rolled out to all SMT members to equip them on policy formulation and implementation. Parents should be provided with necessary tools in the form of training required to provide basic literacy, numeracy, and life skills and follow up on their children's progress. Teachers' workshops ought to be conducted to update them on curriculum and pedagogical matters. Curriculum specialists and circuit managers should be on board as far as the curriculum and its implementation and management are concerned. The study further recommends that large scale research be conducted to investigate whether ACE-SML programme had an impact on curriculum management and implementation and instructional or pedagogical leadership.

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# CONTESTATIONS AND CONTROVERSY DOGGING THE CONSTITUTIONAL RIGHTS OF AFRICAN LANGUAGES

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**Abstract**
Controversy, contradictions and contestations surrounding the marginalization of the indigenous African languages with particular reference to contributions in Volume 32, No. 1 (2012) of the *South African Journal of African Languages* have triggered the present contribution. This paper argues that a language is part and parcel of a living community culture. Therefore, no language can grow, develop and prosper without it being embedded in the living culture of a community it is supposed to serve. In other words, no amount of policy, resources and interventions can come to the rescue of a language whose community has little or no respect for. A living language is expected to act as a cultural vehicle through which a community engages issues that impact on its very survival. The community also uses it to transmit its ethos, customs, traditions and values from generation to generation. Unfortunately, in a multicultural country such as South Africa only a dominant culture will prevail and its language will also become the main vehicle for communication. This paper employs the analytic and reflective methods to interrogate a variety of thought provoking contributions by a selected number of authors to broaden and deepen the discussions and also to flag pertinent issues not catered for in their deliberations so as to bring to the fore a different voice to the debate.

**Keywords:** Contestations, controversy, dogging, constitutional rights, African languages

## Introduction

Facts are stubborn things even though they allow different people to interpret them differently; nevertheless, they remain sacredly truthful. In other words, facts remain facts whether we like it or not, and they help us to deal even with what Watson (1982, P.xi) alleges happens when he says "too often we see only what we expect to see; our view of the world is restricted by the blinkers of our limited experience". The author's own personal position is that one should allow facts to speak for themselves as far as possible without involving one's own emotions unless their views are well informed, objective, balanced and well considered. Thus, while the constitution would like to have all eleven languages treated equally, the truth is that some are 'more equal' than others, for-instance, English, Afrikaans and to some extent isiZulu are domineering. In reflecting on the topic of the equality of all the eleven languages and how they grow and development, it is advisable to do so unemotionally so as to be to able deal with such questions as:

- When did the marginalization of the African languages start and why?
- Who carried out the systematic marginalization of the African languages and for what purpose?
- What role did the indigenous-language-speakers (Africans) play in all this and what are they actively doing at present to restore, develop and sustain their languages?

In addition, Rampele (2016) also posits the following questions:

- Why are African languages dying on our watch as African academia? and
- Why African children are denied the wonders of their own traditional history, culture and literature?

Compellingly, Ranamane (2012, p. 27) points out that:

> The missionary societies in the 19th century (viz. the London Missionary Society, the Wesleyan Methodist Missionary Society, the Paris Missionary Society, the Berlin Lutheran Society and the Hermannsburg Lutheran Society) pioneered the development of Setswana into what it is today.

The other European nations like the French, Swiss and so on also played similar roles as missionaries in other parts of South Africa and Africa as a whole. However, the submission by Ranamane shows clearly the role played by missionaries in preserving the now neglected and downtrodden African languages for posterity. Perhaps it is high time that the indigenous-language-speakers (Africans) themselves come to the fore and actively restore and promote their languages rather than look-up to the constitution and do very little on their part. On the contrary, Kadenge (2012: p.11) boldly argues that:

> The issue of the indigenization and ownership of the English language in Southern Africa has been a subject of considerable empirical and theoretical discussion in current linguistic and sociolinguistic literature.

Seen as such, Bogale (2009,p.1091) argues that "English is highly prized as a language which may offer access to higher education and international opportunity; however, it is foreign to most, and is known and used only by a small minority of educated economic and/or political elite. On the other hand, English as an international language has served as an effective language of trade, diplomacy, research, text book publication and media throughout the world.

Therefore, the issue seems not to be clear cut as it is neither here nor there, because some authors brings to the fore a contradictory viewpoint that leads to further controversy and contestation instead of a common view that offers a consistent, coherent and systematic focus. From Kadenge's (2012) submission, the question could be asked as to why English should be indigenised at expense of the African languages. In an article by Petzell (2012, p.17) eight African languages in Tanzania are shown to be marginalized by an African (Black) government:

> The eight languages in this survey are all marginalized in the sense that they are not used in formal domains. They are not recognised by the state in domains such as public administration, education, health care or legal services.

Unfortunately, English continues to replace indigenous language by becoming the official language and also the lingua franca of many African countries and this undercuts the various arguments against it. To this end, certain authors are actually engaged with new discourse on a rapidly emerging phenomenon called multiculturalism which like a storm is taking root in urban areas where multiracial societies are on the increase. In these areas the dominant language has become English as opposed to the past in which different cultures and

languages existed side by side. The author argues that a living language should not only be rooted in the constitution, but should be a medium of communication that is also cherished by the community that gave birth to it. In other words, it should be a ground motive force through which the cultural life of the community in the form of traditions, customs, beliefs and experiences is communicated and also transferred from generation to generation.

To this end, Ruperti (1975) warns that 'a living culture is continuously changing'. This appears not to be the case as far as the majority of African languages are concerned because instead of adapting to the new demands and circumstances they are failing to adapt but only expect the constitution to give them protection. To contextualise issues, Sirayi (2012: p.42) in another vein points out that:

> During the colonial times, many communities in Africa, including South Africa abandoned their traditional religious practices in favour of Christianity. Christianity was embraced because of its perceived stand against injustice and oppression of the poor.

A Christian philosophy like all other philosophies prescribes its own way of ordering human behaviour and in so doing prescribes a totally different style of living; a living style unique to the African way survival. Christianity has a particular set of demands as opposed to the African way of living. Seen in this light, some African adherents of the Christian religion played an active part in marginalizing their own cultures and languages by despising them as backwards. The above quotations, tell a chilling story about the slow migration of the African soul away from indigenous culture and its languages towards the Western way of life. The Africans are not what they were and surely not what they should be and ought to be. Even in the independent states of Africa the Western culture is dominant and continues to be so as educated Africans propagate the influence of European culture more than their own.

To sum up, a historical perspective on how the marginalization of the African culture and its languages took place could be of great help in the search for a balanced and objective outcome rather than to look-up to policy and constitutional imperatives for a solution. Hence, this chapter argues that the fundamental mistake made by the crafters of our new constitution was failing to comprehend that the nature and usage of a language as an aspect of a culture is not dependent only on legislation and constitutional imperatives, but on resources, care and passion to nurture it; to grow, develop and promote it. According to Rupertti (1975 p,:3) brilliantly point out that:

> The organised education of the youth of a community is part and parcel of the culture of the community. Without culture, no matter how primitive it may be, there can be no education; and without education, no matter how rudimentary, no culture and no community. When one talks of education, therefore, one is also inevitably talking of community culture and cultural communities.

Briefly, teachers as educated and trained professionals should understand the meaning of this quotation both implicitly and explicitly, for it focuses on the core elements which define the primary aim of the entire teaching/learning activity which all professional teachers are expected to be aptly conversant with.

## The rationale for the paper

The purpose of this paper is to debunk the argument that says legislated policy and constitutional imperatives alone can inject new life into a dying language. Furthermore, this paper is of the strong view that a language that is not linked to the economy, industry, commerce, administration and education per se has no chance of survival or growth and development.

The paper's rationale is based on the argument that for a language to be of value to the society it is meant to serve, it must be able to address issues that are important to its survival. This seems not be the case with most indigenous African languages as they play second fiddle to the Western (European) languages like English, French, and Portuguese etc.

The other very compelling view is that a language is important because it contains songs, stories, poems, idioms, proverbs, prose, folktales and so on that would no doubt benefit the society by capturing its imagination with respect to things like entertainment, education, instruction and guidance in their ways of living. The importance of the indigenous languages resides in their music, dance, song, folk narratives, proverbs, idioms and prose because these are the things that speak to the heart of the African people and their communities. Without the recognition of the indigenous language the African people will have no past to guide them into a meaningful, productive and a promising future based on faith and hope.

The paper aims to bring about further engagement with the hope of deepening and broadening the debate about the marginalization of the African languages and in particular the discourse as triggered the contributions captured in the issue of the *South African Journal of African Languages* (Volume 32, No.1 of 2012). The issues canvassed in the journal present a plethora of ideas and thoughts which give a panoramic view that could act as substructure for further engagement towards the realization of a rich and comprehensive superstructure on the important role African languages could and should play to advance the African cultures within the context of multiracialism and multiculturalism as a result of the advent of the rainbow nation.

To achieve its aim, the paper used amongst other methods the '…phenomenological methods as they keep "the eyes" of the educator on the ballgame rather than on a lot of statistics, hypothesis, and theories' (Troutner as quoted by Vanderburg in Higgs, 1995: p, 175). In addition, the analytic and reflective methods were also used to analyse and reflect on the articles contributed by the various authors and the quotations used by them as supportive sources to their views as captured in the above cited journal. Finally, a great deal of time and effort was dedicated to reflecting on both the literary sources used in this chapter and as well as on those contributions advanced by the different authors in Volume 32, No. 1 (2012) of the *South African Journal of African Languages*.

## The conceptual framework

The outcomes of the 1994 general elections and the advent of the new constitution of 1996 raised many expectations, but this only led to frustrations because in the end it became very clear that most promises were based on empty and or false grounds and therefore raised false hopes. To be precise, stated that the new constitution was a vehicle through which nation building would be brought about in the form of the rainbow nation. In other words, the new South Africa would become a melting pot for the creation of a plural society that would be known as the rainbow nation in which all eleven languages would be accorded official status

based on a false hope that they would also enjoy equal treatment. The contradiction was that the policy of according official status to each of the eleven languages could be ironically interpreted as subtly and indirectly perpetuating the old ideology of apartheid which promoted the policy of ethnicity and racial segregation.

To all intends and purposes, South Africa is a multicultural countries with a diversity of cultures and languages. The diverse cultures could become either its strength or weakness because unity in diversity is just simply hard to realise. Especially when having regard to Kriegler's (1993: p, 40) opinion that views nation building as a process aimed at "… treating everyone in the same way, have everyone learn the same language, offer them the same services, instil the same values and impart the same knowledge". We are all aware that this has not happened after almost 20 years of independence and freedom.

Ironically, nation building in South Africa is not a one way road as there are many challenges that are underpinned by demands of cultural diversity whose roots are deeply entrenched in the erstwhile policy separate development. Whatever is done with regard to cultural diversity is likely to remind us of the policy of apartheid rather than to make us bury and forget it. With the ongoing dwindling of resources as a matter of great concern it will be increasingly difficult to dedicate resources to the exclusive development of the indigenous African languages. Human rights are obligatory and language rights, although important, are sometimes difficult to achieve and even practice because they are often irreconcilable with the demands of the education imperatives or those of the work place. In other words, there are situations that override and also supersede the language rights as laid down in the constitution. Paulson (1987) argues that 'the fierce defence of languages becomes meaningful if we do not disguise the fact that the real issue is not linguistic; but also political, not to say economic.'

**The apartheid philosophy and the black cultures**

The philosophy of apartheid was constructed around a paradigm underpinned by the doctrine of Calvinism as founded on the tenets of the Old Testament. Hence, Mathipa (1991:11) concurs by arguing that 'the old testament and the doctrine of Calvinism moulded the Afrikaner nation of South Africa to what they are today'. In support Diedrichs in O' Meara (1983:70) argues that:

> God ordained the division of nations, each with its specific calling. Service to the nation is thus service to God. The nation is the only true reality. Any attempt to obliterate national differences abrogates God's natural law. Hence, the implacable rejection of notions of human equality.

Consequently, it was mainly this kind of interpretation of the word of God that led to the proclamation of the philosophy of separate development which later became popularly known as apartheid. Apartheid introduced a system of governance that did not embrace democratic values and principles that are in accord with individual rights in the form of freedom of movement, choice, association, expression and of occupation as enshrined in the present constitution that is being referring to. Seen through democratic lenses, apartheid as an ideology embraced policies which were totally oppressive, discriminatory and very selective as they were applied to denigrate Non-Whites only. The term Non-Whites includes Blacks,

Coloureds and Indians. In turn, each of these three groups was treated differently from the other as well. Hence, Cronjé (1948:19) argues at length that:

> The objective of the policy of apartheid was the own and separate development of the various race groups. Therein lay the positive character of the direction for apartheid. One operated from the viewpoint that every race group had the inherent potential to experience self-development by itself, according to its own potential. The policy of apartheid aimed to maintain that racial diversity. The objective of the direction of racial apartheid was precisely the preservation of the races. It could indeed be regarded as something negative, because the preservation of races meant own and differentiated racial development, social, economic, spiritual, cultural and national. And furthermore, the policy of apartheid aimed finally at the self-determination of the various race groups, in compliance with the existing ethnic differences.

Even though apartheid as philosophy was regarded and also labeled as the skunk of the world by the cruel and unreasonable manner in which it treated the majority Non-Whites, it nevertheless contributed greatly in preserving cultures of the different race groups in South Africa. It did this by brutally and mercilessly creating unviable homelands with artificial borders that kept Non-Whites away from economically developed areas of the country. In the final analysis, it was in these so called homelands that ambitious African leaders espousing the philosophy of separate development came to the surface and with the active support of the apartheid government took control of the affairs of their various homelands. In the long run, a homeland that felt ready to assume full independence did so and this give it unfettered powers over its own affairs including cultural matters.

Those homelands which did opt for independence each had a Minister of Interior whose sole function was to see to the development of the culture of his/her people. In so doing he/she restored not only the culture of his/her race group but also maintained it and gave it a new lease of live. For instance, every homeland had a radio station that beamed information through its own language. Some homelands even had television broadcasts that used their own languages. Bophuthatswana had a successful cultural establishment called Mmabana Cultural Centre which did a sterling job on such aspects as traditional dance and music which are enjoyed even today by a large segment of our population and international community as well.

In summing up, apartheid was a like a double edged sword that was used firstly as a pretext to restore and develop the Non-Whites' cultures while on the other hand it was used as a divide and rule policy designed to exclude Non-Whites from economically developed areas of South Africa. The thrust of the following section is around the role the homelands played in the furtherance of Black cultures during the entire era of apartheid

> [t]he policy of the Department of Bantu Education was one of mother tongue instruction throughout the primary school. A change of medium, if it must come at all, must come at the beginning of the secondary school. The question of change of medium at any stage always bristles with many difficulties affecting, inter alia, the psychological and scholastic development of the child (Cingo in Duminy, 1968:136).

This policy found resonance with the homeland policy and not with the present constitutional dispensation which allows the individual learner and also the individual school to choose a language they prefer as a medium of instruction.

**The homeland system and the Black cultures**

The emphasis in this section falls squarely on a language as an aspect of culture and also as a tool of communication in vital areas like education, art and cognitive development of a people. A language is very important and in this regard, Vos and Barnard (1984:49) draw our attention to the fact that "an education system functions in the lingual aspect of reality and is partly determined by it". In contrast, some authors' arguments seems to be unmoved by such a reality because they think that policies, resources and government interventions alone can bring about the difference by ensuring that a language grows and develops. In reality, an education system depends entirely on a language to effectively provide the community with schools that teach contents and programmes that comply with its cultural needs and also its other immediate/local needs.

In this respect, Vos and Barnard (1984:91) instructively point out that "educational development, then, correlates to at least some extent with a people's general cultural development". The role of a democratic government and not a colonial or apartheid one should be one of facilitating and not one of imposing policies on its subject as it appears from the arguments of Madonsela (2012:93) because democratically speaking one can take a donkey to the river but one cannot make it drink.

Seen as such, Barnard & Vos (1984:37) are emphatic that:

> Mother tongue instruction is didactically expedient and pedagogically accountable because cognizance is taken of the origin, national character, identity, and the life- and world-view of a people (language is the symbolic expression of everything which exists within a nation).

The homeland system led to each race-group taking over the education of its own people from the much maligned system of Bantu education which had replaced the likeable missionary system of education that was provided to the Blacks over many years. Vos and Barnard (1984:113) argue that:

> In Black communities a Bantu language is the mother tongue. None of the Bantu languages at their present stage of development is suitable as medium of instruction at secondary and tertiary levels, mainly because the development of the Black education system (a transplant of a developed Western education system) has outstripped the development of the indigenous languages that ought to serve as media of instruction.

Even today this problem is still there because Black races are continually opting for English as a medium of instruction in their schools for a variety of reasons, some of which are convincing while others are just outright frivolous. Consequently, all homelands and Non-White education in general used mother tongue as a medium of instruction at the primary level of education. Hence;

> From standard A to standard 2, the medium of instruction is the pupils' home language. In standard B the teaching of one official language (English or Afrikaans) is introduced and in standard 1 the other one. As from standard 3 the medium becomes either the vernacular or one of the official languages, as decided by the parent body. Whatever medium of instruction is used; the vernacular and two official languages are offered as subjects" (Department of Education and Training annual report, 1986, p106).

Today there is a total paradigm shift because a learner can complete her/his education without mother tongue instruction from primary right through university education.
In conclusion, presently the indigenous languages are at the mercy of the powers given to schools like the Model C schools which are predominantly private schools and are managed by the white educators and mainly specialize in English or Afrikaans to the exclusion of the Black languages as medium of instruction. Demographically speaking, Blacks are in the majority in South Africa, therefore it is logical that they are predominant in Model C schools yet their languages feature very little in their education either as a learning area or medium of instruction. This terrible and deliberate omission or commission would surely not have happened during the era of apartheid. The present constitution too, allows individuals and/or schools the freedom of choice in terms of the medium of instruction. In this context, it becomes impossible to use policy, resources and interventions to over-rule these rights that are enshrined in the constitution. Hence, the argument that says the issue of language rights in the new South Africa is neither here nor there because even African themselves prefers English to their own mother-tongues.

**The importance of mother tongue instruction**

A language of a community is its vehicle or tool of communication. Through it people share their experiences, feelings, ideas, thoughts as they deliberate on a common vision for the future. In fact a language is a repository of a people's culture, customs and traditions. A language constitutes a vital link between the present and the past like a bridge. On a cautionary note, Cingo in Duminy (1968:137) points out that:

> The continued and permanent existence of a language depends mainly on the people who speak it and speak it correctly. A language which is not spoken, sooner than later dies out and only survives in the archives as a subject for academic interest or a theme for the language researcher.

Therefore, when a language that must run like a golden thread through the fabric of the community stops to function, then most of the distinguishing characteristics of its community also cease to be important and no policy, resources and interventions can be of any assistance.
Furthermore, Cingo in Duminy (1968:137) posits the view that:

> A nation, then, which wishes to preserve its identity and its language heritage for posterity, and which wishes to enrich humanity with its special contribution must take steps to preserve its language.

On the contrary, anyone who wishes to destroy a language of a people must do so by teaching their children a different language which is foreign to their culture so that when they grow up they will not be able to communicate with their own offspring through their own mother tongue. Mother tongue has been graphically and dramatically described as the language of the

child at the mother's knee and takes the highest position in the existence of man as he will use it even when he says goodbye at the time of death. This makes a language to be part and parcel of the whole man's being.

In conclusion, 'whatever qualities – intellectual, physical, moral and psychological – a child may possess on his arrival at school, this one tool, his mother's tongue is the nervum rerum/the soul of things. His mother tongue is the chief weapon with which he will forge his way in the new and strange school environment' (Cingo in Duminy, 1968: p, 141). The above mentioned points and observations are overlooked by some authors yet these are so critical and crucial with regard to cultural preservation and the development of any language.

**Multiculturalism and Black cultures**

In the dark days of apartheid the Department of Education and Training annual report (1986:112) tells us that 'a wide range of subjects and study directions is offered. In addition to the two official languages, the Department also offers a choice of 8 African languages at its secondary schools. A pupil is required to take at least six subjects in std. 10, of which one subject must be an official language and one mother tongue of the pupil concerned'. In order to pass a pupil had to satisfy each one of the following groupings:

i. An official language as represented either by English or Afrikaans;
ii. A mother tongue which is the pupil's home language;
iii. One subject from the natural science stream;
iv. One subject from the social science stream; and
v. One subject from the general stream with the grand total mark of 720.

Invariably, if learner failed his/her mother tongue as a subject then the learner was deemed to have failed the whole examination and this is no longer the case. Harsh as this might sound, it nevertheless preserved the African languages that today are threatened with extinction.

Multiculturalism in South Africa is symbolic of the rainbow nation and it is here to stay. Thus, in South Africa today the dominant culture is a Western one and it is strongly expressed through Afrikaans and English, and the majority of citizens in South Africa love this setup. Our Black languages have very few role models and the few that are there are quite inadequate to address the predicament in which the indigenous languages find themselves. The universities too, cannot do much if the high schools do not produce learners who have done some African language at matriculation level to feed into courses that offer indigenous languages.

To recapitulate, the choice of this or that language has been constitutionally left in the hands of a learner or a school or university. Our democratic constitution is pretty much like a vow couples are subjected to; that is, when procedure requires them to say 'till death do us part' while on the other hand, this solemn undertaking is undermined by legislated laws that allows couples to sue for divorce on the grounds that the marriage is irretrievably broken down. In this respect, our constitution gives with one hand while taking back with the other. Therefore, the talk that language rights are sacrosanct is not totally correct because an individual learner or even a school can choose which language will be used as a medium of instruction to the exclusion of the others thereby marginalizing them to the point of extinction. This is the

prevailing condition in most parts of our country and nothing legal can be done about the matter except by way of violating the very constitution.

In recapping, the best way of starting the long process of cultivating the love of one's mother tongue should be from the primary level of schooling right through to university and not the other way round. African families should be our target if we need to convince people to use mother tongue as medium of communication because families are the true building blocks of the nation and its cultural heritage.

**Language as a fundamental right**

To start with, what makes a language to be a fundamental right that must be preserved through the constitutional imperatives? The common answer would be: a right is a moral principle describing and also sanctioning an individual's freedom of action in social setting or environment. In this context, Hospers (1970:603) is of the view that 'there is only one fundamental right (all the others are its consequences or corollaries); a man's right is to his own life'. The right to life is paramount because only a living person can enjoy the right to the freedom of association which allows a person to forge friendship ties with others through the use of a language. A language allows a person to enjoy the right to freedom of speech/expression through associating with others on the basis of engagement and exchange of ideas and views.

Therefore, it is troublesome as well as flawed to argue that 'matters of language rights and human rights are intertwined as they both touch on human rights' (Universal Declaration of Human Rights, 2006, as referred to in Madonsela, (2012:92). This argument lacks the third variable which was supposed to accommodate the first two variables already cited. Analytically speaking, is it allowed to argue that A is A. However, it will be another thing where A and B exist side by side and only relate to each other in as far as they contain common elements that interrelate them and then make the argument that they are equal. Thus, it is flawed to then conclude they are both (A and B) equal to A instead of saying they are AB. As such it is flawed to argue that language rights and human rights are all human rights. The use of analogy or syllogism is a common approach in academic discourse even though it is also a very tricky method to those who are unfamiliar with it.

The simplest way it is used is as follows; 'all human beings have rights; X is a human being; therefore, X has human rights.' A language is a secondary human right that allows human beings to access their freedom of association, speech, movement and generally affords people the right to choose. Alternatively, human rights also allow people the opportunity to protect their other rights like property rights by communicating wishes, intentions and even problems and solutions through a language. Human rights arise as a result of human beings living together because by nature man is a gregarious animal. As a gregarious animal that lives in social context man's entire actions come into focus as they are viewed as good/right or evil/wrong, and may, therefore, need to be either encouraged or eradicated.

Going back to the view that a 'language is a fundamental right', then, what must be done if a university such as University of South Africa teaches its illiterate adult learners through the medium of English when they can hardly speak it correctly, or can hardly read and write it? Some authors who have contributed papers in the *South African Journal of African Languages* (Volume 32, No. 1, 2012) are language lecturers who appear to pay no particular

attention to such a glaring matter, while on the contrary they seem to praise the meager steps taken by the SABC when trying to popularise the use of indigenous languages in specific programmes. Such steps are belated and also pale in insignificance when compared to what the homelands did with their radio and television stations during the era of apartheid. Always remember that facts are facts and they are stubborn things, as such the best thing to do is to allow them to speak for themselves, and to do so fairly without fear or favour. If you are forced to venture an opinion then call a spade a spade and not a big spoon.

Furthermore, it often happens that lecturers/teachers prescribe English versions of subjects they teach. For example History, Geography, Biology; etc. but when they teach in class they do so most of the time through a mother tongue. The logical question is: why not translate or write such books in the mother tongue? Why even ask learners to write examinations, assignments and homework in English when we know they don't have a good command of the English language? These and many other questions need to be answered in order to bring an authentic and valid solution to the prevailing problem.

Again, there is in the cited journal what is called an additive multilingualism approach which is thought could bring about diversity as an enrichment in the classroom situation. The actual question would be: what are the basic requirements needed to make such an approach to work? The author of additive multilingualism approach gives an answered in the form of a quotation which is not followed up by examples or an explanation detailing how this is to be done. Surely this approach will never solve the current problem raised by some authors except to exacerbate it.

As far as the issue of resources is concerned which appear in Madonsela (2012:93) the answer is neither here or there because it is expected that those who champion the need for resources should also indicate the type of resources that should be provided for the African languages to be able to grow, develop and prosper, but nothing was recommended by writers like Madonsela. However, Nkuna (2010) tries to fill the void by arguing that:

> South Africa can position itself to succeed if it can optimize the use of its own resources. Whatever its resources, the nation can gain a competitive advantage as its custodian by carefully shepherding it, enabling it to perform more competitively than its rivals. And 'the 11 official languages' is one of the country's most strategically valuable resources.

The above submission by Nkuna is just a tip of the icebergs because the issue of the provision of teaching and learning resources is fundamental to the success of the education system. Seen in perspective, Nkuna's quotation which appears above is explained through what is termed a golden rule as enunciated through another quotation by Garelli (1997) which states that: Creating a stable and predictable language legislative environment;

- Investing massively in language education, especially, at secondary level, and in the life-long training and improvement of the workforce.

The two points above are not convincing to say the least even though it is argued that one of them has been accommodated in the policy of languages at public schools.

The section dealing with resources is so thin that its contribution can be characterised as being negligible. In retrospect, the question that still lingers is that: can the above cited views, vague as they appear to be to the author, be regarded as a solution? The answer is no because they only talk of the secondary level of education when the problem of indigenous languages is pervasive as it affects the entire education system. The words of Livingstone as quoted by Boyce (1974) come to mind when he said 'so little done and yet so much still needs to be done.'

Finally, institutions of higher education are drawn into the debate via a quotation citing the views of former President Mbeki on the significance of languages in nation-building for they form its building blocks. Whatever Mbeki said did not address the issue of languages at tertiary level of education directly. Alexander (2003:186) is the individual who can be said to have ventured into giving an informed opinion on how those who teach languages at tertiary level should be empowered.

In recapitulating, the issues of language translation and interpretation to the author's mind can only be done by those who are empowered to do so. Thus, if the struggle to implement the language policy and also the bill of rights in as far as making languages become human rights is concerned, then this is still an unfinished business because the process of translation of and interpretation could impose a variety of questions and problems on their own. The implementation process hangs in the balance because the likely scenario may be the creation of something that in reality becomes a mere white elephant. Some languages are on their way to extinction from the market arena where the employer dictates which language will be used to communicate with him/her.

In a way, the sayings that 'when in Rome do what the Romans do' may in the end sound very true here. Seen as such, African entrepreneurs are just emerging and have as yet to amass the credentials that will make them competitors in the world of job creation such that they too, can dictate as to which language/s should be used when communicating with them. Here we are talking about the brutal force a language has to successfully facilitate financial transactions at international level and not petty local dealings involving customers buying from a small shop around the corner.

**Conclusion**

It is indeed desirable and accountable educationally, pedagogically, psychologically and emotionally to teach learners through their mother tongue and such a view and or fact is adequately canvassed by various sources of literature as cited above. This is one of the biggest hurdles/questions that South Africans still have got to answer fully.

The roots of a language have been shown to lie in the community through its own family structures which constitute its building blocks. Therefore, if educated families, who are regarded as role models, despise their own mother tongue, what can then be expected from followers of such role models? Here too, a big debate is called upon to map-out a way forward.

If schools, colleges and universities do not see the preservation of African languages as their responsibility because of their tendency to opt for either English or Afrikaans as medium of

instruction to the exclusion of the indigenous languages, then we have a problem on our hands.

If we are to make recommendations at all, then it is obvious that the issue of mother tongue should be revisited because it is trite knowledge that most countries in the world use mother tongue instruction to optimally develop the learners' potential. Thus this paper recommends that; for a proper development of African languages to take place, then, these languages must not only be taught but must also become languages of instruction even at tertiary level especially in the teaching of adult learners who cannot even talk, read and write English. Finally, the problem is real and even bigger than what was discussed so far.

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# ARE WE HEADING IN THE RIGHT DIRECTION? ASSESSING UNIVERSITY-COMMUNITY ENGAGEMENT DIMENSIONS OF A SOUTH AFRICAN HIGHER EDUCATION INSTITUTION

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## ABSTRACT
University-Community engagement has become the latest core business of South African Higher Education Institutions adding to traditional teaching and research duties. As a consequence of its newness, university-community engagement policies and programmes are poorly developed, opening a window for various incoherent and inconsistent interpretations and implementation inefficiencies. With this background, the objective of this paper is to develop and apply an analytic framework that can be used to critically assess the university-community engagement policy and practice dimensions of a South African Higher Education Institution. To achieve this, the author utilises scientific literature to develop an analytic framework and subsequently applies it to categorise university-community engagement initiatives of a South African Higher Education Institution. This categorisation is organised along a continuum from weak community engagement (i.e. community services and outreach projects) to strong community engagement (i.e. community engagement projects). Results reveal that community services dominate the collection of university-community engagement initiatives at this university. Overwhelmingly, the results point to the fact that even a leading South African Higher Education Institution grapples with the practice of community engagement. This paper concludes with novel recommendations.

**Keywords**: Analytic framework, Conceptual framework, South African Higher Education Institution, University-community engagement participation typology

## INTRODUCTION
In recent years, South African Higher Education Institutions (HEIs) or universities have added university-community engagement (UCE) as a core activity alongside teaching and research. Despite its newness, South African universities have hastily initiated projects in the name of 'university-community engagement'. In this rush, any university initiative that involves local community members and/or external stakeholders is applauded as genuine university-community engagement. In fact, most South African universities report on 'university-community gatherings' as genuine university-community engagement initiatives. This naive comprehension of university-community engagement plagues many South African universities and discourages scholarly inquiry on this subject. It is in this context that this paper develops and applies a university-community engagement participation typology that will aid both the policy and practice of this third mission statement of universities. This deeper comprehension of university-community engagement is necessary for societal transformation-a moral duty of any university, here and elsewhere. To achieve this mammoth task, this paper is organised into the following manner: section 2-addresses the contested nature of 'community' and 'engagement' resulting in the conceptualisation of university-community engagement; section 3-develops an analytic framework that will be applied to assess university-community engagement at the selected university; section 4-outlines the research design, describes the case study institution, and limitations of this study; section 5-

presents the results from the application of the newly developed analytic framework (i.e. the University-Community Engagement Participation Typology); section 6-discusses these results, and; section 7-drawns concluding remarks and charts the way forward.

## CONCEPTUAL FRAMEWORK

This paper begins by conceptually the contested nature of community and engagement in order to add context and direct the audience accordingly.

### Defining Community and Engagement

*Contested nature of Community*

The term community remains highly contested and this is reflected in the agglomeration of ninety-four (94) definitions of this term. Banks (2003) points out that it is almost compulsory that any publication with the term 'community' in the title should have a section on this topic and this paper does not deviate from the norm. According to Banks (2003), one of the difficulties with 'community' is that it falls into the category called an 'essentially contested concept'. This is because the term 'community' descriptive, evaluative, and active connotations. The active and descriptive meanings refer to attributes of the world that describe what it is to be a 'community' –for an example, 'a group of people with something in common'(Green & Mercer, 2001). The evaluative meaning of 'community' comprises the value connotations that attach to the term –that is, 'community' is a positive term, and when used may invoke images of affection, cooperation, and kindliness and so forth (Green & Mercer, 2001). Here is the detailed explanation of descriptive, evaluative, and active meanings of communities. The *descriptive community* refers to the social scientists' use of the term to describe a group or network of people, institutions, or organisations that share 'something' in common (Green & Mercer, 2001). This generally involves both (social) interaction within the group or network, and a sense of attachment, identification with or belonging to. A distinction is often made between two types of communities: *territorial communities* and *communities of interest or identity* (Green & Mercer, 2001). In *territorial communities*, people have their geographic location/area in common, for example, their neighbourhood, village, town or city. *Communities of interest or identity* are based on characteristics other than physical proximity such as ethnicity (Caucasian), professional membership (Medical doctor's association), and religion (Islam) and so forth (Green & Mercer, 2001). However, these categories are not mutually exclusive, as some communities, such as mining or fishing villages, for example, may be rooted in both shared locality (near mines or fishing water ways) and common interest (as miners and fishers). Banks (2003) continues that whilst we would define descriptive community as entailing an attachment to a group or social network. This author posit that it is important to note that the term is very often used in the context of policy and practice simply to refer to a geographical neighbourhood (for example, 'the Pretoria community'), or set of individuals ('the New Yorkers') who may not actually feel any sense of attachment to an area or identity with any group referred to. Strictly speaking, this is a misuse of the term, but it is used so commonly that we need to take it into account. The term 'community' is often used in a policy context to mean simply people who live in an area and/or lay people (people who are not professional) (Banks, 2003). This is often what is meant when reference is made to 'community representatives', 'consulting the community', 'community development workers', or University-Community Engagement (UCE). This use of the term may imply a sense of belonging or attachment, even though there is none whatsoever.

*Normative community* or *community as values* refers to the universal values that are associated with communities (Green & Mercer, 2001). These universal values may include, but are not limited to, affection, friendliness, care, dignity, respect, and love and so forth (Green & Mercer, 2001). In scientific literature, Butcher (1993, p 14-17) identifies three 'community values' as: *solidarity*, *participation*, and *coherence*. In their strongest form, he argues, these are grounded in a communitarian philosophy. Although there are many different versions of communitarianism, broadly speaking they all hold to a view of the individual as constituted by society (Etzioni, 1995a; Etzioni, 1995b). In African culture, this sense of community is articulated in the *Ubuntu* philosophy (I am because you are). Butcher's three community values can be described as follows: *Solidarity* –the relationships that sustain community members at an emotional level. Solidarity is what inspires affection, even loyalty of an individual member towards the group; *Participation* –shared activities with others, through which individuals are involved in realising common goals and playing a part in the collective life and aspirations of the group. *Coherence* –the embracing by individuals of a framework of meanings and values that provide some overall sense of their world.

The meaning of *Active community* builds on and encompasses the descriptive and value meanings identified above. It refers to collective action by members of territorial or interest communities that embraces one or more of the communal values of solidarity, participation and coherence (Green & Mercer, 2001). This is the idea of community that public policy makers often have in mind when they seek to promote initiatives drawing upon community strengths and capacities (Banks, 2003). In the context of university community engagement (UCE), we can further distinguish between the internal and external communities. The internal community refers to the 'university community' comprised of academics and support staff working for Higher Education Institutions (HEIs) or universities and the student populace. The external community refers to stakeholders that work together with the university including surrounding 'communities', corporate citizens, civil society organisations, and government departments etc.

*Characterising Engagement*

Definition from the Merriam-Webster dictionary unambiguously indicate that, in engagement, two or more partners, such as people, institutions, or nations, enter into an asymbiotic agreement or mutual destruction (such as armed conflicts). The essence of engagement is that both parties actively participate. However, literature, notably Arnstein Ladder of Participation (Arnstein, 1969), supported by Cooke and Kothari (2001) and Reed (2008), have shown that participation can occur at different levels sometimes with negative unintended consequences. Arnstein's Ladder of Participation-in Figure 1-depicts that participation begins with involvement-or non-participation-characterised by manipulation and therapy through to citizens control. Participation increases as we move through the ladder from manipulation up until the citizens are empowered to take ownership of their lives or any initiative (i.e. Citizen control).

Figure 1: Arnstein's Ladder of Participation (1969)

According to Arnstein (1969) manipulation refers to non-participation by the less powerful who are used by the powerful to achieve their own ends (Cornwall, 2008). Therapy aims is to cure or educate the participants and their role is only to achieve public support through public relations rather than contributing to the process. Informing or communication is vital for legitimate participation, but all too frequently the emphasis is on a one-way flow of information, as there is no channel for feedback (Cornwall, 2008). Consultation is also a legitimate step in utilising apparatus such as attitude surveys, neighbourhood meetings, and public enquiries (Cornwall, 2008). However, Arnstein (1969) argues that this is just a window dressing ritual. Placation an example of this level is co-option. It allows citizens to play an advisory role or to plan, but power holders and/or gate keepers retain the right to judge the legitimacy or feasibility of the advice. Partnership in this level, according to Arnstein (1969), power is in fact redistributed through negotiation between citizens and power holders (Cornwall, 2008). Planning and decision-making responsibilities are shared. The poor and powerless citizens can negotiate and engage in trade-offs with power holders, for example, through joint committees. In Delegated power, Arnstein (1969) considers that at this level, citizens hold a clear majority of seats on committees and have delegated powers to make decisions (Cornwall, 2008). The public thus now has the power to assure accountability of the policies and programs for themselves. Last, in Citizen Control the residents handle the entire process of planning, policymaking, and managing a programme, for example, neighbourhood cooperation, with no intermediaries between it (Cornwall, 2008). Furthermore, citizens formerly without power obtain the majority of decision-making seats in the committees or full managerial power (Arnstein, 1969). Most of Arnstein's Ladder is characterised by non-participation and limited participation akin to manipulation and tokenism. We begin to see genuine engagement creeping into the ladder through partnership, delegated power, and citizens' control. This is because, in genuine engagement, information and decision making flows into both directions from the experts (university community) to the lay people (external community) and vice versa-this is what engagement is supposed to be.

## ANALYTIC FRAMEWORK

In the previous paragraphs the author conceptualised community and engagement. In paper, we use the university community to refer to staff members, mostly academics and students, and the external community to refer to communities outside of the university or external stakeholders including lay people from local or surrounding communities-which are often the subject of university-community engagement. This background information will aid the

process of developing the university-community engagement (UCE) typology which will be used (in section 5) to analyse UCE activities at a South African Higher Education Institution. This newly developed university-community engagement framework is inspired by work from Bender (2008), Lazarus, Erasmus, Hendricks, Nduna, & Slamat (2008), Reed (2008), and Arnstein (1969).

**University-Community Engagement Typology**

Both community and engagement reinforce each other. We require active communities-meaning engaged communities to have community engagement. Also, the term engagement itself implies that two or more parties are working together-side by side (Dempsey, 2010). In the context of this paper, university-community engagement is when (lay) people from external communities work together with the members of the university community in a back-and-forth processes characterised by equal powers in the decision making process. To this end, the researcher has developed a University-Community Engagement Typology (see Table 1) that will be used as a continuum to analyse UCE activities of a selected South African Higher Education Institution (HEIs).Table 1 is explained as follows: First, the participation objectives of UCE determines the type of participation (as indicated in Table 1) and this might include mere information and consultation in which information or knowledge flows in one direction, either from the external community members (ECMs) to the university community members (UCMs) or vice versa. Second, during the involvement stage, the external community members (ECMs) and the university community members (UCMs) collaborate in the University-Community Engagement (UCE) initiative and information or knowledge flows in both directions. Third, the last stage of University-Community Engagement (UCE) is ownership of the UCE initiative by the external community members (ECM) resulting in empowerment (see Table 1). Last, various University-Community Engagement (UCE) activities will be judged by this engagement/participation typology. Again, the levels or degree of external community members (ECMs) participation in the University-Community Engagement (UCE) activities depends upon the objectives or intended outcomes/results of the UCE activities. Examples of UCE activities might include, but are not limited to, student internships, volunteer services, and social programmes and so forth.

Table 1: University-Community Engagement (UCE) Typology in the context of social science research

| **Stages of participation (i.e. degree of participation/rungs of the ladder)** | **Main purpose of participation (i.e. objectives of participation)** | **Characteristics of the stage (i.e. direction of communication flows)** | **Type of participation (i.e. theoretical basis/pragmatic participation etc.)** | |
|---|---|---|---|---|
| **Non participation** | Manipulation | Powerful stakeholders uses powerless stakeholders to legitimise decision making | Non-participation | **Community Services** |
| | Therapy | Information/knowledge flows in one direction from the powerful stakeholder to the powerless stakeholders | | |
| **Communication (Informing)** | Information | Information/knowledge flows in one direction from the university | Passive | |

| | | | | |
|---|---|---|---|---|
| | | community members (UCMs) to the external community/stakeholders (ECMs). | participation (degrees of tokenism) | **Community Outreach** |
| **Consultation (& placation)** | Extraction | Information/knowledge flows in one direction from the external community/stakeholders (ECMs) to the university community members (UCMs). | | |
| **Co-construction/co-design/Involvement (delegated power & partnerships)** | Co-development (characterised by reciprocity of actions) | Flow of information/knowledge is arranged in both directions: from the UCMs to the ECMs and vice versa, in a process of shared learning (co-learning/collaborative learning). | Interactive participation (delegated power & partnership) | **Community Engagement** |
| **Decision/Empowerment (citizens control)** | Ownership | External community/stakeholders (ECMs) are responsible for the UCE initiative(s). | Active participation/self-organisation/citizens control (Citizens control) | |

(Researchers' own synthesis inspired by Bender, 2008; Lazarus *et al*., 2008; Reed, 2008; Arnstein, 1969)

## RESEARCH DESIGN, CASE STUDY DESCRIPTION, AND LIMITATIONS

### Research Design

This study utilised literature and developed a University-Community Engagement (UCE) Participation Typology. The author then applied this newly developed typology to categorise UCE activities and/or projects of the University of South Africa (UNISA) along a continuum. This continuum is constituted by three categories namely: Community Services, Community Outreach, and Community Engagement. The author groups Community Services and Community Outreach as Weak UCE engagement and Community Engagement as Strong UCE engagement (these are explained in the discussion section).

Secondary data on university-community engagement projects was obtained from the various colleges at UNISA. These projects were analysed using the newly developed assessment framework (see Table 2 for results). The links to the websites of considered colleges and their various community engagement projects are also presented in the results section.

### Case Study Description

UNISA was used as an instrumental case study in order to test and refine the newly developed UCE framework (Baxter & Jack, 2008). UNISA was founded in 1873 as the University of the Cape of Good Hope and later became the first public university in the world to teach exclusively by means of distance education in 1946. UNISA is unique in the sense that it was the only university in South Africa to provide all people with access to education, irrespective of race, colour or creed. Today, UNISA is the largest open distance learning institution in Africa and the longest standing dedicated distance education university in the world. The university enrols nearly one-third of all South African students. It offers short

courses and certificate programmes to three-and four-year degrees and diplomas, to over 400 000 current students. This institution actively promotes community engagement together with teaching and research activities. The Department of Community Engagement and Outreach drives their community engagement endeavours.

There are five (5) main categories of community engagement at UNISA and these are: Curriculum-related community engagement, Non-curriculum-related community engagement, Research-related community engagement, Community building and capacity building, and Community outreach.

This institution with its headquarters in Pretoria, the capital city of South Africa and it also has campuses in major cities and towns throughout the country.

## RESULTS

This section presents the results from the application of the University-Community Engagement (UCE) Participation Typology to UCE projects.

Table 2: Applying University-Community Engagement (UCE) Typology to UCE activities of UNISA

| **Stages of participation (i.e. degree of participation/rungs of the ladder)** | **Type of participation (i.e. theoretical basis/pragmatic participation etc.)** | | **University-Community Engagement (UCE) initiatives at the University of South Africa (UNISA)** |
|---|---|---|---|
| Non participation | Non-participation | Community Services | -Polokwane Rural Schools Development<br>-Winning Schools Project (WISP)<br>-College Student Career Day<br>-Maths, English, and Accounting Tutorials<br>-Health & Life Skills Training Project<br>-Community Asset Mapping (Camp for Change) Program<br>-Unearthing a Sustainable Future<br>-Mandlethu School Project<br>-Tswelopele Skills Development Programme (Human Capital Development)<br>-CEMS Going Green (inward looking)<br>-EMSSA & Enactus (Student Initiatives)<br>-Dynamics of Violence in Schools Project<br>-Vhembe Schools Project<br>-Early Childhood Development (ECD) Outreach Intervention<br>-Growing ECD Teachers in Rural Areas<br>-Llima Lemfundo<br>-Science Outreach (in KZN)<br>-Analyses of Mathematics Teacher Professional Development Programmes<br>-Learn not to Burn<br>-I-SET (Inspired Towards Science, |

| | | | |
|---|---|---|---|
| | | | Engineering & Technology)<br>-GirlPower Project<br>-MathsEdge Project<br>-Computer Literacy in Communities (CLIC)<br>-Socially Relevant Computing<br>-Cyber Security Awareness Community Engagement Project (CSACEP)<br>-Engineers Without Borders-UNISA<br>-Astronomy Outreach Programme<br>-Solar Vehicle Project<br>-ICT in Classrooms<br>-Unisa Science Exhibitor<br>-Kgautshwane Integrated Community Development Programme<br>-English Language in Postgraduate Research (inward looking)<br>-Mathematics and Science for Nkungumathe Youth Development Project (Training in KZN)<br>-Institute for Science & Technology Education Winter School Project<br>-Ukuphepha: Child Safety, Peace, & Health-Community Intervention<br>-Ukuphepha: Authorship Workshop (inward looking) |
| Communication/ Information<br>Consultation (& placation) | Passive participation (degrees of tokenism) | Community Outreach | -Makapanstad Career Expo<br>-Community Asset Mapping (Camp for Change) Program<br>-Environmental and Map Literacy<br>-Entrepreneurship (E-Hub)<br>-Professional Learning in Schools Management (Mpumalanga Project)<br>-ICT in Classrooms<br>-Community & Public Safety Measurement |
| Co-construction/co-design/Involvement (delegated power & partnerships) | Interactive participation (delegated power & partnership) | Community Engagement | -Urban Agriculture Project<br>-Lenasia Eco-schools Project<br>-Mothong African Heritage Trust project in Mamelodi<br>-Entrepreneurship (SMME Summit)<br>-500 Schools Project Lesson Study<br>-Waste to Energy for Lenasia's Thembelihle ECDs<br>-Mothong Indigenous Medicine and Fruit Nursery Project<br>-Photovoice Project (Ukuphepha Initiative: Demonstrating African Safety) |
| Decision/Empowerment (citizens control) | Active participation/self-organisation/citizens control (Citizens control) | | |

Table 2 is converted into a schematic illustration below (in Figure 1). It is clear that community services dominate the collection of University- Community Engagement (UCE) project at UNISA.

Figure 1: Number of UCE activities per category at UNISA

**DISCUSSION**

We discuss the results using the UCE participation typology synthesised from Bender (2008), Lazarus *et al*., (2008), Reed (2008), and Arnstein (1969) and applied in Table 2. The discussion is organised along weak and strong university-community engagement categories. Weak university-community engagement refers to community services and community outreach programmes in which stakeholders, commonly lay people, are passive recipients of university services and information, and/or knowledge flows in one direction from the 'learned' university staff members to the 'lame' lay people. Occasionally, as in the form of information and consultation, university staff members will ask lay people to comment on their work-usually as subjects in a research study. This is classical placation whereby lay people are treated as puppets to legitimise decision made by power holders. Strong university-community engagement begins with partnerships between lay people and learned colleagues from universities. In this arrangement, power holders can delegate decision making powers to lay people in local communities-this represents a further step towards the ownership of UCE initiatives by local residents and/or external stakeholders. Citizen control is the penultimate expression of strong university-community engagement wherein lay people or external stakeholders are responsible for the management of UCE initiatives. Informed by this background, we discuss the results from the application of the UCE participation typology in Table 2 as follows:

**Weak University-Community Engagement**

*Community Services*

In the context of scholarly work, manipulation can refer to the 'ivory tower' social sciences research whereby lay people and/or external stakeholder are subject of scholarly inquiry (Cornwall, 2008). Academics gain valuable field notes from these subjects and then produce journal articles and book chapters that aid their career progression without benefiting the research subjects. In its worst form, manipulation might occur when the scholar/researcher does not provide feedback to the research subjects on his/her findings. Manipulation has been the traditional practice at universities since time immemorial and this is mainly responsible for the current research fatigue.

In Therapy, our findings reveal that initiatives akin to this practice (of therapy) dominate UCE activities at UNISA. According to Arnstein (1969), therapy refers to initiatives that aim to educate lay people in order for them to support societal transformation. Common activities undertaken by UNISA include training workshops for lay people in local communities, extra-curricular classes (tutorials) to boost Grade 12 learners' performance and improve Mathematics, Physical, and Accounting Sciences in school going children, career exhibitions to recruit prospective students, and awareness raising campaigns. Figure 1 illustrates that community services dominates the fifty-one (51) UCE projects at UNISA. The author argues that community services are weak university-community engagement initiatives in which learned university staff 'talks at' lay people in local communities-the one-way flow of information and/or knowledge in a workshop or classroom setting confirms this. The absence of a feedback mechanism in this type of settings has the potential to perpetuate powerlessness of lay people in decision making processes and further disenfranchising them. Cooke & Kothari (2001) termed this phenomenon the 'tyranny of participation' in which the (participation) setting is skewed in favour of powerful stakeholders and undermines the interests of powerless ones.

*Community Outreach*

Like the verb suggests, information is when learned academics and non-academics from universities 'talk at' lay people and/or external stakeholders. Here, the role of lay people and/or external stakeholders is to 'listen to' the university 'experts'. In environmental change studies, particularly climate change, information is used to 'educate' lay people and/or external stakeholders about the eminent danger posed by climate change and climate variability. Unlike information, consultation is a two-way process with a feedback mechanism. The two-way flow of information and/or knowledge allows the university 'experts' to 'talk with' lay people and/or external stakeholders. However, in this process, decision making is reserved to university 'experts' as they are usually the power holders and gate keepers at their institutions. Again, to use an example from climate change studies, that during consultation university 'experts' and lay people and/or external stakeholders can exchange scientific and indigenous knowledge about the occurrence of climate change. Placation is used by university 'experts' to legitimise their decision making processes but also to give credibility to their scientific inquires or research projects. By involving lay people and/or external stakeholders as subjects or participants in their scholarly inquiry increases the acceptability, credibility, transferability, and allows for generalisation of their findings. It also allows them to solicit and use public funds (from tax payers) by obtaining research grants (that are often tax free) from government funding agencies (such as the National Research Foundation in South Africa). In this regard, reaching out for community (via community outreach projects) serves to benefit the university and not the lay people and/or external stakeholders. UNISA, our case study area, clearly distinguishes community outreach from community engagement-this is a step in the right direction. Only seven (7) projects out of fifty-one (51) can be categorised as community outreach initiatives.

**Strong University-Community Engagement**

*Community Engagement*

Strong UCE is characterised by collaboration and reciprocity between university 'experts' and lay people and/or external stakeholders. Information and/or knowledge flows in both directions and decision making powers are shared equally between the different stakeholders and/or role players. This is achieved through a graduation process wherein lay people and/or

external stakeholders move from partnering with university 'experts' into decision making roles. The ultimate objective of this graduation process is to put university-community engagement projects under the control of lay people and/or stakeholders (through citizens' control). Only eight (8) out of fifty-one (51) projects at UNISA can be categorised as truly engaging communities.

## LIMITATIONS

The authors wished to include more universities in the assessment. However, it was very difficult to locate the university-community engagement section on the website of most South African Higher Education Institutions or Universities. In turn, this limited the assessment to the University of South Africa which has University-Community projects listed on its website.

## CONCLUDING REMARKS

This paper developed and applied a UCE participation typology to categorise UNISA's UCE projects. Although our case subject, UNISA, clearly indicates on its website that it conducts UCE and outreach projects only. However, findings contradict UNISA's position by adding another categorisation of community services. This addition to the UCE participation continuum is derived from literature (Bender, 2008, Lazarus *et al*., 2008, Reed 2008; Arnstein, 1969). The absence of this categorisation, up until now, is evidence that this paper makes novel contributions to the body of knowledge on UCE.

This paper warned against community outreach projects that solicit that participation of lay people and/or external stakeholders to legitimise decisions made without their consent. This has been the traditional approach of university staff, mainly academics, applying for research grants and producing research work. This approach has largely been responsible for the current research fatigue in local communities. The paper recommends that this process should be used in transition towards strong UCE.

Strong UCE offers universities and lay people the opportunity to participate in scholarly and community works. This arrangement increases the participation dividend on both sides and also rejuvenates societal interest in scholarly endeavours. In fact, strong UCE is the *Canaan* that most universities strive towards. This newly developed and applied UCE participation typology can bring universities somewhat nearer to this *Promised Land*. This paper recommends that this newly developed UCE participation typology should be applied as a guiding framework for universities across the world if we are to reach *Canaan*.

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APPENDIX 1: UNISA's UCE projects by College

| **University of South Africa (UNISA)** | **Community Services** | **Community Outreach** | **Community Engagement** |
|---|---|---|---|
| College of Accounting | Polokwane Rural Schools Development<br>Winning Schools Project (WISP)<br>College Student Career Day<br>Maths, English, and Accounting Tutorials | Makapanstad Career Expo | |
| College of Agriculture & Environmental Sciences | Health & Life Skills Training Project<br>Community Asset Mapping (Camp for Change) Program<br>Unearthing a Sustainable Future<br>Mandlethu School Project | Community Asset Mapping (Camp for Change) Program<br>Environmental and Map Literacy | Urban Agriculture Project<br>Lenasia Eco-schools Project<br>Mothong African Heritage Trust project in Mamelodi |
| College of Economic & Management Sciences | Tswelopele Skills Development Programme (Human Capital Development)<br>CEMS Going Green (inward looking)<br>EMSSA & Enactus (Student Initiatives) | Entrepreneurship (E-Hub) | Entrepreneurship (SMME Summit) |
| College of Education | Dynamics of Violence in Schools Project<br>Vhembe Schools Project<br>Early Childhood Development (ECD) Outreach Intervention<br>Growing ECD Teachers in Rural Areas<br>Llima Lemfundo<br>Science Outreach (in KZN)<br>Analyses of Mathematics Teacher Professional Development Programmes<br>Learn not to Burn | Professional Learning in Schools Management (Mpumalanga Project) | 500 Schools Project<br>Lesson Study |
| College of Human Sciences | Not specified | Not specified | Not specified |
| College of Law | Not specified | Not specified | Not specified |
| College of Science, Engineering, | I-SET (Inspired Towards Science, Engineering & Technology) | ICT in Classrooms | Waste to Energy for Lenasia's Thembelihle ECDs |

| | | | |
|---|---|---|---|
| & Technology | GirlPower Project<br>MathsEdge Project<br>Computer Literacy in Communities (CLIC)<br>Socially Relevant Computing<br>Cyber Security Awareness<br>Community Engagement Project (CSACEP)<br>Engineers Without Borders-UNISA<br>Astronomy Outreach Programme<br>Solar Vehicle Project<br>ICT in Classrooms | | |
| College of Graduate Studies | Unisa Science Exhibitor<br>Kgautshwane Integrated Community Development Programme<br>English Language in Postgraduate Research (inward looking)<br>Mathematics and Science for Nkungumathe Youth Development Project (Training in KZN)<br>Institute for Science & Technology Education Winter School Project<br>Ukuphepha: Child Safety, Peace, & Health-Community Intervention<br>Ukuphepha: Authorship Workshop (inward looking) | Community & Public Safety Measurement | Mothong Indigenous Medicine and Fruit Nursery Project<br>Photovoice Project (Ukuphepha Initiative: Demonstrating African Safety) |
| Graduate School of Business Leadership | Not specified | Not specified | Not specified |
| Academic departments, institutes, centres, & bureaus | Not specified (or located in the Colleges) | Not specified (or located in the Colleges) | Not specified (or located in the Colleges) |

APPENDIX 2: List of UNISA Colleges' UCE webpage(s)

**College of Accounting Sciences**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=96664 Accessed 31st May 2016

**College of Agriculture and Environmental Science**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=28082 Accessed 31st May 2016

**College of Economic and Management Sciences (CEMS)**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=26872 Accessed 31st May 2016

**College of Education**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=27067 Accessed 31st May 2016

**College of Human Sciences**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=23822 Accessed 31st May 2016

**College of Law**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=97027 Accessed 31st May 2016

**College of Science, Engineering and Technology**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=22776 Accessed 31st May 2016

**College of Graduate Studies**
http://www.unisa.ac.za/Default.asp?Cmd=ViewContent&ContentID=95417 Accessed 31st May 2016

# TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE (TPACK) AS A THEORY ON FACTORS OF THE USE OF ICT IN PEDAGOGY: A REVIEW OF LITERATURE

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**Abstract**
The use of ICT in pedagogy has a positive impact on the teaching and learning process. While ICT in pedagogy is an undertaking involving stakeholders like teachers, administrators and students, teachers are considered to play a core role in the use of ICT in pedagogy. What factors will then make the teachers use ICT in pedagogy? In deriving the factors affecting the adoption of an innovation, such as ICT in pedagogy, several frameworks are available. Of these frameworks, we review some of the traditional innovation adoption frameworks namely, the Innovation Diffusion Theory (IDT), the Technology Acceptance Model (TAM), the Technology-Organization-Environment (TOE) framework, and the Unified Theory of Acceptance and Use of Technology (UTAUT). We find that all the above models have been widely employed in guiding innovation adoption studies. We notably argue that the Technological Pedagogical Content Knowledge (TPACK) framework can be included on the list of innovation adoption models. Thirdly, we review past studies on TPACK and isolate pertinent gaps. Hence we develop a framework basing on TPACK, and derive hypotheses to guide further studies on the factors related to the use of ICT in pedagogy by teachers and call for a paradigm shift to have large scale quantitative studies testing whether the TPACK constructs relate to the levels of use of ICT in pedagogy.

**Keywords:** ICT; Knowledge; Pedagogy; TPACK

## 1 Introduction

Majumdar (2006) observed that ICT like computers, web 2.0 technologies, internet, email and video conferencing provide an array of powerful tools that induce the transformation of the isolated teacher-centered and text-bound classrooms into rich student-focused interactive knowledge environments. According to him, the use of ICT in pedagogy helps the learners not only to access information in a variety of communication styles but it also helps the learners to benefit from collaborative learning which as a result augments creative thinking and problem solving skills. We can therefore safely say that the use of ICT in pedagogy has a positive impact on the teaching and learning process. While ICT in pedagogy is an undertaking involving stakeholders like teachers, administrators and students, teachers are considered to play a core role in the use of ICT in pedagogy (Voogt & Knezek, 2008).

What factors will then make the teachers use ICT in pedagogy? In deriving the factors affecting the adoption of an innovation, such as ICT in pedagogy, several frameworks are available. Of these frameworks, we intended (i) to review some of the traditional innovation adoption frameworks namely, the Innovation Diffusion Theory (IDT), the Technology Acceptance Model (TAM), the Technology-Organization-Environment (TOE) framework, and the Unified Theory of Acceptance and Use of Technology (UTAUT); (ii) to argue that Technological, Pedagogical, and Content Knowledge (TPACK) can be included on the list of innovation adoption models; (iii) to review past studies on TPACK; and hence (iv) to

develop hypotheses basing on TPACK to guide further studies on the factors related to the use of ICT in pedagogy by teachers.

## 2 Traditional Theories on Innovation Adoption

Our first objective is to review some of the traditional models which guide studies on innovation adoption. These include the IDT (subsection 2.1), the TAM (subsection 2.2), the TOE framework (subsection 2.3), and the UTAUT (subsection 2.4).

***2.1 Innovation Diffusion Theory:*** Rogers' Innovation Diffusion Theory (IDT) is one of the several frameworks for guiding studies on the factors related to the adoption of innovations. Although referred to as Rogers' IDT in this research, according to Bakkabulindi (2014), it was originally termed the "Paradigm of Innovation-Decision Process" as was proposed by Rogers after his doctoral studies on the diffusion of agricultural innovations at Iowa State University, US, in 1958. Bakkabulindi further contends that the IDT also takes on several terms such as the Classical Innovation Theory, the Diffusion of Innovations, and the Diffusion Theory among others. According to Rogers (2003), the IDT relates innovation adoption to three categories of correlates. The categories of correlates are, the characteristics of the individual potential adopter, how the adopter perceives the innovation, and the characteristics of the social system. The social system refers to the organization where the potential adopter is.

Concerning the individual characteristics of the potential adopter as correlates of innovation adoption, Rogers (2003) specifies that an individual's tendency to adopt any innovation such as ICT in pedagogy is contingent on the individual characteristics of that person. According to Bakkabulindi (2014), such individual adopter characteristics incorporate the level to which that person intermingles with the change agents of significance to the innovation in question; the degree of training of significance to the innovation the person has received; how cosmopolitan the person is (cosmopolitan refers to urban influence or non-conservativeness); the age; the sex; and the income level of the person. With regard to the perceived characteristics of the innovation as correlates of innovation adoption, Rogers' IDT specifies that an individual's susceptibility to use any innovation is contingent on the way that individual perceives the innovation in terms of its relative advantage (PRA), compatibility (PC), complexity (PCx), trialability (PT), and observability (PO) among others

Rogers defined PRA as "the degree to which an innovation is perceived as being better than the idea it supersedes" (p. 229); PC as "the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (p. 15); and PCx as "the degree to which an innovation is perceived as relatively difficult to understand and use" (p. 15). Rogers (2003) further defined PT as "the degree to which an innovation may be experimented with on a limited basis" (p. 16), while PO is "the degree to which the results of an innovation are visible to others" (p. 16). On the nature of the social system as a factor of innovation adoption, Rogers insists that an individual's ability to adopt any innovation is determined by the organization where that individual is. That is to say, whether the social system is ready for change; has a good culture that facilitates change; has a size that is fit for change; and has a leader who facilitates change.

Several studies (e.g. Bakkabulindi, 2012; Bakkabulindi, Barigayomwe, Omuron, Ongia & Bashasha, 2016; Chen, 2014; Chigona & Licker, 2008; Mbatha, Ocholla, & Roux, 2011;

Richardson, 2009; Zhang, 2015) that have used the IDT as a research framework in explaining the factors affecting the adoption of different innovations in various disciplines such as political science, history, education among others can be found. Others (e.g. Bakkabulindi, 2014; Oliveira & Martins, 2011; Sahin, 2006) have reviewed the literature on empirical studies that used the IDT. In particular, for example, Bakkabulindi (2014) was a literature review on the IDT that argued that other recent innovation adoption frameworks, such as the TAM (subsection 2.2); the TOE framework (subsection 2.3); and the UTAUT (subsection 2.4) were derived from the IDT. This implied that their wide applications are also applications of the IDT. In other words, as Bakkabulindi concluded, the IDT is very popular in theoretically supporting studies on innovation adoption.

***2.2 Technology Acceptance Model:*** Another traditional model related to innovation adoption is the Technology Acceptance Model (TAM), which was suggested by Davis (1989) after his doctoral studies at Massachusetts Institute of Technology (MIT). TAM suggests that perceived usefulness (PU) and perceived ease of use (PEOU) affect the behavioral intention (BI) to use an innovation, which in succession affects the actual use of that innovation. Davis defined PU as the prospective user's subjective possibility that using the innovation will boost job accomplishment. He also defined PEOU of an innovation as the extent to which a prospective user expects the innovation to be free of struggle. TAM is a popular framework because of its parsimony, thus many studies (e.g. Ajimon & Kumar, 2013; Alharbi & Drew, 2014; Fathema, Shannon, & Ross, 2015; Kim, 2014; Nair & Das, 2011, 2012; Park, 2009; Teo & Milutinovic, 2015; Wong, Osman, Goh & Rahmat, 2013) have used it as their theoretical basis. Other researchers (e.g. Awa, Ukoha & Emecheta, 2012; Nair & Das, 2011; Surendran, 2012) have reviewed literature on studies that involved TAM. The general consensus of such reviews is that the TAM has been greatly used to guide studies on the factors related to the adoption of innovations.

***2.3 Technology-Organization-Environment Framework:*** The Technology-Organization-Environment (TOE) framework developed by Tornatzky and Fleischer (1990) relates the adoption of an innovation to three categories of factors namely the characteristics of the technology being adopted, the characteristics of the organization where the potential adopter is, and the characteristics of the environment, where the potential adopter's organization is situated. According to Tornatzky and Fleischer, the technological context is the pool of technologies inside and outside an organization and the adoption of a technology depends on perceived relative advantage, compatibility, complexity, trialability, and observability of the technology. The organizational context refers to the characteristics of the organization such as a top management encouragement, organizational beliefs, the quality of human resource, and size related issues such as internal negligent resources and adaptation.

Tornatzky and Fleischer (1990) further defined the environmental context as the ground in which an organization manages its business, its clients, contenders, and dealings with the government. Several studies (e.g. Aboelmaged, 2014; Angeles, 2013, 2014; Bradford, Earp, & Grabski, 2014; Cao, Jones, & Sheng, 2014; Lippert & Govindarajulu, 2006; Ramdani, Chevers, & Williams, 2013; Scott, 2007; Yeh, Lee, & Pai, 2014) have taken advantage of this framework as their theoretical basis. Other scholars (e.g. Arpaci, Yardimci, Ozka & Turetken, 2012; Oliveira & Martins, 2011) have reviewed literature concerning studies that employed the TOE. Hence one can discern that while the TOE framework is not as popular as say the TAM model, it has also been widely used.

***2.4 Unified Theory of Acceptance and Use of Technology (UTAUT):*** Venkatesh, Morris, Davis and Davis (2003) proposed and tested a unified innovation acceptance and use research model, which they called the Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT was referred to as unified because it incorporates components across eight user acceptance models such as the IDT (subsection 2.1) and the TAM (subsection 2.2). UTAUT argues that a user's intentions to utilize any innovation and his/ her successive usage behaviors are affected by four main variables namely: performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC). Venkatesh et al. defined PE as the extent to which using an innovation will offer benefits to consumers in carrying out certain activities; EE as the level of ease concomitant with consumers' use of an innovation; SI as the degree to which consumers recognize how important others (like family and friends) believe they should use a particular innovation; and FC as consumers' perceptions of the resources and help available to accomplish a behavior. The relationship between these determinants and dependent variables are regulated by age, gender, experience and voluntariness of the use of the innovation. Voluntariness of use refers to a selection being made of a person's free will, as opposed to being made as the result of coercion.

Various studies (e.g. Attuquayefio & Addo, 2014; Bakkabulindi, Mugagga, Shopi & Kabasiita, 2015; Hsu, 2012; Kabacki-Yurdakul, Ursavas, & Becit-Isciturk, 2014; Khechine, Lakhal, Pascot, & Bytha, 2014; Kim, 2014; Liu & Huang, 2015; Magsamen-Conrad, 2015; Oye, Noorminshah & Rahim, 2012; Venkatesh, Thong & Xu, 2012) have used UTAUT as their theoretical basis. Other researchers (e.g. Taiwo & Downe, 2013; Williams, Rana, Dwivedi & Lal, 2011) reviewed literature concerning the application of the UTAUT. In summary, while some reviewers (e.g. William et al., 2011) expressed reservations about the use of UTAUT, claiming that a large number of studies just cited UTAUT without actually utilizing it in their empirical research, other reviewers (e.g. Taiwo & Downe, 2013) have observed that many studies have increasingly used the UTAUT framework. Thus, the UTAUT framework has been reasonably used in guiding innovation adoption research.

## 3 Technological Pedagogical Content Knowledge (TPACK) Framework

Our second objective is to argue that TPACK can be added on the list of innovation adoption models. As mentioned in section 2 of this paper, many past studies in regard to the use of innovations such as ICT in pedagogy have focused on frameworks or models, such as the IDT (subsection 2.1), the TAM (subsection 2.2), the TOE framework (subsection 2.3) and the UTAUT (subsection 2.4). While all those frameworks suggest factors that may be important for innovation adoption, none of them presents knowledge as an important factor. To cater for this inadequacy, Mishra and Koehler (2006) offered a model to describe the nature of knowledge needed by teachers to effectively adopt the use of ICT in pedagogy.

Mishra and Koehler (2006) argued that, in order for teachers to use ICT in pedagogy, they need at least three domains of knowledge. The three domains are content knowledge (CK), pedagogical knowledge (PK) and technological knowledge (TK). Mishra and Koehler defined CK as the "knowledge about the actual subject matter that is to be taught" (p. 1026) and PK as the "knowledge about the processes and practices or methods of teaching and learning and how it encompasses…overall educational purposes, values and aims' (p. 1026). They defined TK as the teachers' "knowledge about standard technologies, such as books, chalk and blackboard, and more advanced technologies, such as the Internet and digital video" (p. 1027). The interaction between the three primary knowledge domains, CK, PK and

TK gives rise to three secondary knowledge domains namely pedagogical content knowledge (PCK), technological content knowledge (TCK) and technological pedagogical knowledge (TPK). These combinations of knowledge, according to the TPACK framework, enhance the use of ICT in pedagogy by teachers.

Mishra and Koehler (2006) defined PCK as the "knowledge of pedagogy that is applicable to the teaching of specific content" (p. 1027). They defined TCK as the "knowledge about the manner in which technology and content are reciprocally related" (p.1028); and TPK as the "knowledge of existence, components, and capabilities of various technologies as they are used in teaching and learning settings, and conversely, knowing how teaching might change as the result of using particular technologies" (p. 1028). When PCK, TCK and TPK knowledge domains interact, they form a triad, technological pedagogical content knowledge (TPACK), which according to Mishra and Koehler (2006), is the ideal combination of knowledge needed by a teacher to use ICT in pedagogy. The seminal article (Mishra & Koehler, 2006) defined TPACK as "an emergent form of knowledge that goes beyond all the three components (content, pedagogy, and technology)" (p. 1028). In summary, TPACK suggests seven knowledge domains namely; CK, PK, TK, PCK, TPK, TCK, TPACK as major determinants of the use of ICT in pedagogy by teachers as illustrated in Figure 1.

Figure 1: The TPACK framework
Source: Adapted from Mishra & Koehler (2006).

## 4 Past Studies on TPACK

Since the inception of the TPACK framework in 2006, several researchers have invested time and effort to employ it to guide their studies. Particularly, while some researches have made seminal contributions to TPACK, others have examined teachers and/ or students on how much TPACK they possessed. Yet others have had interest in the development of TPACK among teachers and/ or students. Some contributors have developed and tested survey

instruments to measure TPACK, while others have reviewed literature on the progress of TPACK as a framework.

***4.1 Seminal Papers on TPACK:*** Papers (e.g. Angeli & Valanides, 2009; Koehler & Mishra, 2009; Koehler, Mishra, & Cain, 2013; Mishra & Koehler, 2006; Niess et al., 2009; Shulman, 1986, 1987) that have made original contributions to the development of the TPACK framework are available. In this section, we hint on the two (e.g. Mishra & Koehler, 2006; Shulman, 1986) that have perhaps been the most influential. As pointed out in section 3, the TPACK framework (Mishra & Kohler, 2006) suggests that a teacher's use of ICT in pedagogy, is contingent upon the teacher's knowledge, which knowledge has domains, namely content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK), pedagogical content knowledge (PCK), technological pedagogical knowledge (TPK), technological content knowledge (TCK) and technological pedagogical content knowledge (TPACK). While the main proponents of TPACK were Mishra and Koehler (2006), their independent variable (IV) was borrowed from Shulman (1986), a seminal article that articulated the importance of knowledge (K) to a teacher. Shulman stressed the importance of CK and PK to the teacher.

He gave seminal definitions to the two variables. In particular, he defined CK as "the amount and organization of knowledge per se in the mind of the teacher" (p. 9). Shulman also gave seminal definitions to PK as the knowledge of "how to teach" (Shulman, 1986, p. 6), and more solidly later as, "how teachers manage classrooms, organize activities, allocate time and turns, structure assignments, ascribe praise and blame, formulate the levels of their questions, plan lessons, and judge general student understanding" (p. 8). Shulman noted that CK and PK were inseparable, stressing that, "mere content knowledge [CK] is likely to be as useless pedagogically as content-free skill [i.e. PK]" (p. 8). Hence he proposed another major domain in TPACK, namely "pedagogical content knowledge" (PCK) for which he gave a seminal definition as, "pedagogical knowledge [PK], which goes beyond knowledge of subject matter per se [i.e. CK] to the dimension of subject matter knowledge for teaching [i.e. PK]" (p. 9).

Another major contribution of Shulman (1986) to TPACK was to call for the framework. In particular, Shulman noted that

> Although we often present propositions [e.g. on what knowledge a teacher needs in order to use ICT in pedagogy] one at a time, we recognize that they are better understood if they are organized in some coherent form, lodged in a conceptual or theoretical framework…. (pp. 10 – 11).

He later on added that, "the presentation of knowledge in the form of propositions has… a significant liability… [because] they become very hard to remember, especially if they aggregate into long lists. This is where theoretical frameworks as intellectual scaffoldings become indispensable" (p. 11). With such insights, Mishra and Koehler (2006) came up with the theoretical framework, TPACK (Figure 1), to build on Shulman's PCK by including the knowledge of technology (TK) that teachers require in the teaching and learning process. The details of TPACK are already given elsewhere (section 3) in the paper.

***4.2 Papers on Examining How Much TPACK Teachers and/ or Students Possess:*** Efforts to examine the extent to which teachers and/or students possess TPACK have been

made by several researchers (e.g. Doering, Veletsianos, Scharber, & Miller, 2009; Koh, Chai & Tsai, 2010; Nelson, Christopher, & Mins, 2009). For example, Doering et al. (2009) pursued to comprehend how social studies teachers' metacognitive responsiveness of their TPACK changed after they had participated in a program. The program comprised professional development for the use of, an online learning atmosphere in the classrooms. Doering et al. collected data from eight teachers from a mid-western city and its suburbs in the United States. Using the constant comparative method, they showed that the most positive change among the participants occurred in the technology knowledge (TK) category. They found that generally, five out of the eight teachers had indicated that their knowledge increased in at least one of the three knowledge components namely CK, PK and TK. However, the pedagogy knowledge (PK) component displayed mixed results, that is, three teachers had perceived an increase in their PK while three had perceived a decrease. Meanwhile, two teachers felt that their PK remained unchanged.

***4.3 Papers on the Development of TPACK by Teachers and/ or Students:*** There are several papers (e.g. Guzey, & Roehrig, 2009; Hannaway, 2016; Harris, & Hofer, 2009; Hosseini, 2015; Koh & Divaharan, 2011; Niess, 2005) on the development of TPACK by teachers and/ or students that can be cited. For example, Guzey and Roehrig (2009) examined the advancement of TPACK among four in-service secondary science teachers in the US as they took part in a professional development program named the Technology Enhanced Communities (TEC). Guzey and Roehrig introduced the science teachers in the program to probeware, mind-mapping tools, and the Internet. They employed a descriptive multi-case study design to footpath the advancement of the teachers over the yearlong program. They collected data through interviews, surveys and classroom observation. Using constant comparative analysis, they found that the program had had "positive impacts to varying degrees on teachers' development of TPACK" (p. 25). In particular, they found that, "contextual factors and teachers' pedagogical reasoning affected teachers' ability to enact in their classrooms what they learned in the program" (p. 25).

***4.4 Papers on the Development and Testing of Instruments to Measure TPACK:*** Several researchers (e.g. Landry, 2010; Schmidt, Baran, Thompson, Mishra, Koehler & Shin, 2009; Shinas, Yilmaz-Ozden, Mouza, Karchmer-Klein, & Glutting, 2013) have developed and tested instruments for measuring TPACK. For example, Landry (2010) intended to develop and validate a survey for measuring mathematics teachers' TPACK (M-TPACK). Landry used an existing survey (Schmidt et al., 2009) to create his instrument. Schmidt et al.'s instrument had 54 items with respect to mathematics, science, social studies and literacy. Landry eliminated all the other items except those of mathematics and as such came up with a new instrument that he termed M-TPACK. He used the M-TPACK survey to collect data from 149 middle school mathematics teachers. He selected these mathematics teachers from 14 public schools in Tennessee in the US. Using reliability analysis, he found that the M-TPACK was a reliable instrument. However, although he mentioned conducting Exploratory Factor Analysis (EFA) to validate the M-TPACK survey, there was no evidence that he actually validated the survey.

***4.5 Literature Reviews on TPACK:*** Researchers (e.g. Jordan & Dinh, 2012; Lubke, 2013, Niess, 2011; Voogt, Fisser, Pareja-Roblin, Tondeur, & van Braak, 2013; Yilmaz, 2015) have reviewed literature on TPACK. For example, Jordan and Dinh (2012) provided a meta-analysis of papers for purposes of identifying the trends in the TPACK research industry.

Using 98 papers sourced from the TPACK.org website which comprised of conference papers and journal articles published between 2006 and 2011, they showed that slightly more papers had been published in conference proceedings than journals. They noted that interest in the framework had generally increased over the review period, of which a peak may have occurred in 2009 and 2010. Furthermore, they observed that the papers had been more research-based rather than discussion papers or reports.

Jordan and Dinh (2012) found that pre-service teachers had figured more in the research on TPACK, followed by in-service teachers, and trailed by higher education students or faculty. They also revealed that mathematics teachers had tended to appear more in the research on TPACK than teachers of other disciplines. Most studies, they reported, had been produced by American researchers. Further, they reported that only a small portion of the studies that they reviewed had been quantitative in nature, hence calling for more quantitative studies. Jordan and Dinh also revealed that survey, interview, observation, and the collection of artifacts had been the regularly used ways of collecting data and that the instrument developed by Schmidt et al. (2009) had been used by numerous studies.

## 5 Hypotheses from TPACK: A Call for a Paradigm Shift

Following the literature review (section 4), it becomes apparent that research attention has been given to TPACK in the scholarly world. However, several gaps arise from such studies. For example, the studies on TPACK have dwelt more prominently on pre-service teachers, than in-service teachers (Lubke, 2013), and less so those in Higher Education (Jordan & Dinh, 2012). The cited studies also suggest a bias against the developing world (Jordan & Dinh, 2012). Studies on the TPACK framework have also been predominantly qualitative as opposed to quantitative. According to Jordan and Dinh (2012), survey, interview, observation, and the collection of artefacts were [the] commonly used ways of collecting data" (p. 6).

Hence a call is being made for a paradigm shift to have large scale quantitative studies testing whether the constructs of TPACK (CK, PK, TK, PCK, TCK, TPK, and TPACK) really relate to the levels of use of ICT in pedagogy (UIP). Unlike in all the previous studies, we are proposing that the constructs of TPACK should be measured separately from the construct of UIP, using standard quantitative measures such as Schmidt et al. (2009) for the constructs of TPACK and Puetendura (2010) for the construct of UIP. The proposed studies should now come from other areas than the US. To lead by example, the lead author of this research is carrying out her doctoral study examining the relevance of the TPACK framework in explaining the use of ICT in pedagogy by teachers of mathematical disciplines in Makerere University. Its synopsis (Batiibwe & Bakkabulindi, in press) is already accepted by a journal. In that study, on the basis of the TPACK framework (Figure 1), Figure 2 provides a framework relating the seven knowledge domains of TPACK to UIP. The dependent variable which is UIP has been conceptualized as substitution, augmentation, modification and redefinition ICTs (Puetendura, 2010).

On the other hand, knowledge domains are conceptualized as content knowledge (CK), pedagogical knowledge (PK), technological knowledge (TK), pedagogical content knowledge (PCK), technological pedagogical knowledge (TPK), technological content knowledge (TCK) and technological pedagogical content knowledge (TPACK) (Mishra & Koehler,

2006). Hence the following hypotheses are to be tested in the study (Batiibwe & Bakkabulindi, in press) using quantitative methods, such as correlation and regression:

H1: CK positively relates to UIP
H2: PK positively relates to UIP
H3: TK positively relates to UIP
H4: PCK positively relates to UIP
H5: TCK positively relates to UIP
H6: TPK positively relates to UIP
H7: TPACK positively relates to UIP

Independent Variables* Dependent Variable**

(TPACK Knowledge Domains) (Use of ICT in Pedagogy)

**Figure 2:** Conceptual framework relating the seven knowledge domains of TPACK to UIP

Source: Concepts adapted from *Mishra and Koehler (2006) and **Puetendura, (2010)

## 6 Conclusion

The use of ICT in pedagogy (UIP) has a positive impact on the teaching and learning process, hence the need to isolate factors related to UIP. Our review of the traditional innovation adoption frameworks namely, the IDT (subsection 2.1), the TAM (subsection 2.2), the TOE framework (subsection 2.3), and the UTAUT (subsection 2.4) has shown that all of these

models have been widely used to guide studies on innovation adoption. We have argued that TPACK can be included on the list of innovation adoption models, specifically if the innovation in question is ICT in pedagogy. If we think of teachers as key in the use of ICT in pedagogy, then knowledge as described by the TPACK framework should be considered important. We have also reviewed past studies on TPACK, and raised gaps in them for future studies to close. Hence we have developed a conceptual framework, from which hypotheses to guide further positivist studies on the use of ICT in pedagogy can base.

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# PROMOTING THE CULTURE OF TEACHING AND LEARNING THROUGH EFFECTIVE CURRICULUM MANAGEMENT

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## Abstract
This study paper focuses on the promotion of a culture of teaching and learning through effective curriculum management. Five school principals from highly performing schools in Limpopo Province were purposively selected to participate in the interview and document study. Content analysis was used to analyse data. The result of the study reveals that sound classroom practice; sufficient and suitable teaching and learning materials; effective and pro-active school leadership are required for the promotion of a culture of teaching and learning. The study further reveals that staff development; support systems; monitoring and evaluation have impact on the effective curriculum management. The study concludes that effective curriculum management promotes effective teaching and learning. It is recommended that the South African Department of Basic Education should ensure that school management teams and heads of departments in particular, are supported and developed to effectively manage curriculum implementation in schools.

**Keywords:** culture of teaching and learning, curriculum management, curriculum implementation, school leadership, organisational development

## Introduction
The School Management and Leadership (SML) programme was influenced by international trends that led to conceptualisation of SML as a training programme for principals in South Africa (Heystek, 2007). In an attempt to transform schools for the better, local and international education ministries used a variety of strategies, wherein SML development was one of the strategies aimed at addressing school development and innovativeness through the development of competencies in transformational, distributive, and instructional leadership. The introduction of SML programme as an academic, as well as administrative course, sought to enhance the performance of schools and learners (Department of Education, 1996; Moloi, 2007; Mufuwane, 2012). ACE-SML programme was a response to the Task Team on Educational Management and Administration recommendations that there was a need to re-skill and develop South African school managers to enable them to address the challenges facing 21st century schools and learners in South Africa (Department of Basic Education, 1996). Curriculum implementation challenges, such as slanted curriculum structure, teachers' difficulties in aligning curriculum and assessment policies, as well as low quality and unavailability of teaching and learning materials (DBE, 2000, p.6) required responsive school leadership and subject specialisation development programme in South Africa to address this awful situation. ACE-SML in South Africa is a strategy to retool and reskill school managers in SML practices that promote performance of schools and learners. Captain (2012, p.iv) argues that there is considerable evidence pointing out that principals play a pivotal role in initiating school effectiveness, particularly as it pertains to learners' academic performance. This study focused on whether the implementation of ACE-SML programme succeeded in achieving the intended programme outcomes, amongst them, improving learners' performance through the promotion of a culture of teaching and learning through effective

curriculum management. Lessons learnt from this study are examined to establish concrete facts on the impact of ACE-SML programme in schools and particularly on learner performance.

In this study focus was on lessons learnt from School Management and Leadership (SML) programme rolled out by Universities in Limpopo Province, South Africa. The programme (SML) aimed at preparing school managers in curriculum management competencies. This study was therefore was conducted to examine lessons learnt from the implementation of the SML programme with specific reference to the promotion of a culture of teaching and learning through effective curriculum management.

**Statement of the problem**

The problem that this study explores is the high failure rate of learners in public schools with reference to Grade 12 and the Annual National Assessment (ANA) results in South African schools. In 2015, schools in Limpopo, Kwa-Zulu Natal and Eastern Cape Provinces contributed to a drop in matric pass rate to 5, 1% (Quintal, 2016; Dayimani, 2016). Furthermore, for the past five years Limpopo Province was one of the bottom three provinces in matric results. ANA results in Limpopo primary schools are also at the bottom three in South Africa (DBE, 2014, p.58). This reveals a shocking state of education in Limpopo Province. Intervention programmes that can change the situation, such as ACE-SML were ear-marked to bring change to the education practices in Limpopo Province. Whereas it is acknowledged that ACE- SML programme is the antidote towards changing schools and school managers' circumstances, the setback in transforming the province is that the number of school managers who were trained by Universities in Limpopo Province were only 700 out of a total of 3924 Limpopo schools (DBE, 2015, p.4). In an attempt to examine lessons learnt from the implementation of ACE-SML programme in relation to the promotion of a culture of teaching and learning in schools through effective curriculum management, the answers to the following research questions were sought in this study. These questions were:

a. What are the factors that promote or impede the culture of teaching and learning in schools?
b. How can curriculum management be used to promote curriculum implementation in schools?
c. What lessons could be learnt from performing schools in relation to the promotion of culture of teaching and learning through curriculum management?

**The purpose of the study**

The study aimed at evaluating lessons learnt from School Management and Leadership (SML) programme rolled out by Universities in Limpopo Province, South Africa. The SML programme aimed at preparing school managers in curriculum management competencies. In an attempt to advance this aim, the study focus was on the following objectives, namely;

a. To investigate the factors that promotes or impedes the culture of teaching and learning in schools?
b. To explore ways in which curriculum management can be used to promote curriculum implementation in schools?
c. To examine and determine lessons learnt from highly performing schools in relation to promotion of culture of teaching and learning through curriculum management?

## Theoretical framework

This study adopted the organisational development theory (ODT) and school-based management approach (SBMA) in an attempt to provide philosophical, theoretical and methodological underpinnings towards understanding crucial concepts.

ODT served as an overarching theory in this study because it provided a theoretical frame towards ACE-SML programme's design and implementation. SBMA was adopted as a partner theory because it supports ODT as it focuses on the growth and development of an individual and that of the institution.

## Organisational development theory

The ever-changing school environment compels these sites to change. Schools as organisations are seen as fluid, socially constructed realities that are continuously created through conversation and images, and the real change happens when those conversations and images change (Bushe & Marshak, 2015). Therefore, organisational development ought to happen, as the process through which an organisation develops an internal capacity to be the most effective, can be in its mission and to sustain itself over the long term (Philbin & Mikush (n.d. p.2). In this study, OTD was selected on the basis of it advocating for development and change in organisations and individuals, which the Department of Basic Education did when it introduced School Management and Leadership development programme for the first time in South African universities. Since institutions are never static, and keep on evolving, there is a need for continuous organisational development. Organisational development is also evolving (Bushe & Marshak, 2009) and this has an impact on practice and theory. An organization's exposure to diverse problems emanating from within and outside of the organization leads to its repositioning. The culture of teaching and learning in schools could only be promoted by considering factors that affect the school as an organisation; teaching personnel; students and school communities. ODT's school agenda is to transform schools into learning organisations. Learning organisations have the capacity to promote a culture of teaching and learning. Furthermore, learning organisations have the capacity to effectively manage schools and most often than not, this results in successful curriculum implementation.

## School-based management approach

SBMA is a paradigm that aims at changing schools from being managed centrally to being self-managed. According to Ganimian (2016, p.33) school-based management (SBMA) refers to decentralization in education wherein power and responsibility are devolved. Since the study was on the implementation of ACE-SML programme, with the aim of identifying lessons learnt from the implementation of this programme, SBMA was found to be an appropriate theory to answer the research problem and questions that guided this study. Since SBMA was adopted in South Africa as part of the restructuring of the education system from apartheid to democracy, its inclusion as a theoretical framework is crucial. Therefore understanding lessons learnt in the promotion of the culture of teaching and learning through effective curriculum management of school principals who graduated from ACE-SML programme would not be complete without SBMA.

SBMA focuses on a shift from school improvement traditions to a development tradition; a shift from quantity to quality; a shift from maintenance to effectiveness; a shift from external control to school-based management; and a shift from simplistic techniques to sophisticated

technology (Cheng, 1996, p.1). Furthermore, Volansky and Friedman (2004, p.21) highlight that SBMA should focus on the facilitation of a new paradigm of education which puts emphasis on the development of students' contextualized multiple intelligences. Based on the stated literature, it succinctly be stated that SBMA aims at changing schools into learning organisations that promote the culture of teaching and learning through effective curriculum management and curriculum implementation. This is possible if SML are pro-active and responsive in approach, because they create sound classroom practice, embark on monitoring and assessment, and promote staff development towards a culture of teaching and learning and curriculum renewal. The impact of School-Based Management on effective curriculum implementation stands to be challenged: the educational motivation for school-based management depends on initiatives taken from within the school itself to improve its performance, through the quality of management, teaching and learning (Dimmock, 1993 p.2).

**Methodology**

A qualitative case study research design was adopted in this study to understand the research participants' lived experiences, perceptions, feelings, attitudes and reflections about the factors that promote or impede a culture of teaching and learning in schools, and how they think curriculum management could be used to promote curriculum implementation in schools. Five school principals were purposively selected to participate in this study. They were selected based on their participation in ACE-SML programme from Universities in Limpopo Province. They are principals leading schools with a pass rate of 80% and more; and the school having learners' enrolments of 800 and more. Data was obtained from school principals through unstructured individual interviews and document study. The two methods of data collection were used in an endeavour to elicit deeper information from participants in relation to their talents, experience and competencies gained from ACE-SML programme that influenced changes in schools with reference to the culture of teaching and learning and curriculum management. These data collection instruments were administered at school site.

The researchers conducted unstructured interviews using three open-ended questions (see Appendix A) as a guideline in examining and determining schools' and school principals' curriculum implementation practices. Follow-up questions were used to thoroughly explore the principal's and school's curriculum implementation practice. Interviews were planned to take 20 minutes, however, it took between 35-47 minutes. Minutes, policies and plans from school documents such as school development; departmental; teaching and learning; and assessment and moderation; and remedial for learners at risk were studied. Appendix B captured document study instrument. Content analysis was used to examine data that was extracted from interviews and document study. The notes taken during interviews and data from document schedule were coded, and patterns and themes were established and captured as key findings.

In this study, trustworthiness and credibility were achieved through method, respondent and theory triangulation. Triangulation was used as validation method that increases validity by incorporating several viewpoints and methods (Yeasmin & Rahman, 2012, p.157). Triangulation was achieved when two or more data collection methods were used (Carter, Bryant-Lukosius, DiCenso, Blythe & Neville, 2014, p.545) and respondent triangulation was attained when more than one participant was used to get different perspectives (Torrance, 2012. p.114; Yeasmin & Rahman, 2012, p.157). Theory triangulation was attained to improve

the credibility and trustworthiness of the research findings (Golafshani, 2003, p.603) and to deepen ones' understanding of the phenomenon under study (Olsen, 2004, p.1).

**Key findings**

The key findings from unstructured interviews and document study were presented and discussed in the following sections.

**Key findings from unstructured interviews**

The key findings emerged from three questions that guided unstructured interviews. These key findings were categorised as factors promoting or impeding the culture of teaching; the impact of effective curriculum management on culture of teaching and learning; and lessons learnt from performing schools. Underneath follows a detailed discussion of the stated key findings.

**Factors promoting or impeding a culture of teaching**

The findings revealed that sound classroom practice, sufficient and suitable teaching and learning materials, sound and pro-active school leadership are factors that promote or impede the culture of teaching and learning in the South African public schools. Sound classroom practice promotes the culture of teaching and learning, whereas, the absence of this factor was found to impede the culture of teaching and learning. Sound classroom practice requires teachers to be transformative intellectuals who think about and analyse what they do, who have considerable discretion in determining many classroom practices; such as the process of teaching, student interaction patterns, the way that the rules and procedures for each classroom are established and enforced, how consequences for student behaviour are enacted, and methods used for resolving conflict are all within the teacher's decision-making domain (Newsome, 2012, p.87,104). It is a fact that sound classroom practice is within a teachers' domain; however, the competency of school management teams in the provision of adequate curriculum management has a positive influence on this aspect. In all the participated schools, it was found that when SMTs have placed plans and systems in place to manage curriculum, and that they are effectively operationalising the plans and systems, the curriculum implementation processes such as teaching, learning, and assessment coupled with afore stated responsibilities of a teacher, as outlined by Newsome (2012) above, were found to be adequately attended to by all teachers. The teachers, as influenced by the school principals had adopted learner-centred pedagogy wherein learner engagement and CTL were promoted, and this tended to lead to sound classroom practices. This was made possible in these five schools through variation of learning environments from classroom oriented-to-visual-based-to-computer-based episodes. Furthermore, schools were found to have been transformed into learning organisations that promoted teachers' expertise in employing new teaching methods through novel technologies.

The study revealed that two of the research participants were fortunate to have been sponsored with computers, which were used for the purposes of curriculum, administration, management and governance. With the other three schools, good and effective management was found to be the ingredient for school success despite their lack of modern technology. Furthermore, the study revealed that these performing schools possess common factors that make them sustainable performing schools in disciplinary and pedagogical content knowledge and socialisation competencies, coupled with teachers' classroom readiness and preparedness, including teachers' good attitude. The teachers highly valued their job; they

were highly motivated, demonstrating high levels of commitment, and gave prompt feedback. In addition, these teachers were engaged in reflective practice as well as being highly disciplined in the school environment. A combination of these factors and attributes contributed to effective curriculum management and good and sound school leadership. High levels of school discipline environments that are further displayed in extra-curriculum activities are caused by improved curriculum management and promoted a culture of teaching and learning environments. This is supported by OECD (n.d., p 220) report that identified classroom disciplinary climate, teachers' efficacy, teacher constructivist beliefs about teaching and good teacher education with structured teaching practice as factors that promote sound classroom climate. Two researches were conducted in different settings, but resulted in related findings.

Sufficient and suitable teaching and learning materials was identified as the second factor that promotes or impede the culture of teaching and learning in schools. Apart from the supply of teaching and learning support materials by the Department of Basic Education, the development of teaching and learning material is critical. Despite the media headlines about non-delivery of teaching and learning support materials in Limpopo Province in 2013, this aspect was still very challenging to South African schools, particularly Limpopo schools, because five of the research participants indicated lack of sufficient and suitable learning materials as a threat to sustain their school perform. Verianna (2013, p.2) indicated that Section 27 organisation that fights for human rights tabled a case of non-delivery of books in Limpopo Province. For two of the schools that introduced e-learning, they have to struggle to pay costs for the maintenance of equipment, the accessibility and connectivity to internet, in order to promote learner engagement and make learning meaningful to 21$^{st}$ century learners. There is a price to be paid in moving the school in a paperless education environment; however, it is a commitment worth taking. If is not taken today, it has to be taken in the near future by all teaching personnel if they would like to flourish and stay in this teaching profession. Teaching and learning materials that are available cannot be accessed because they have a price tag that the public schools and parents cannot afford.

E-Education policy compels schools and teachers to change from monolithic traditional learning environments into varied classroom-based, computer-based and visual-based learning environments. Furthermore, the creation of new learning environments that accommodate e-learning such as the use of new methods and technologies need to be explored in order to construct suitable e-learning materials. The research participants indicated their feelings of despair about the construction of e-learning materials and cited a lack of expertise, unavailability of sufficient technology and electronic gadgets, a lack of connectivity and a lack of human support to handle these emerging tasks.

Effective and pro-active school leadership was identified as the third factor that promotes or impede the culture of teaching and learning in schools. In a similar study conducted by OECD (2003, p.2) on establishing the role and impact of school leadership on teacher and school effectiveness, the study reveals that the key relationships in the ways school leaders strengthen teacher recruitment, development and retention were shown to include factors such as teacher satisfaction, school effectiveness, improvement, capacity, teacher leadership, distributive leadership, organisational learning, and development. This led educational ministries, including the South African Education Ministry, to put school managers' development programmes on a national agenda in a bid to address school management and

leadership as well as curriculum implementation challenges. In achieving sound and pro-active school leadership as one of SML requirements to survive in this position, the SML development programme's design, implementation and focus should be aligned to attainment of this competency. The research participants who were experienced indicated that ACE-SML programme did service novice school managers well, but neglected the experienced school managers. Three participants who have more than ten years' experience felt that the programme failed to meet their expectations. They indicated that one-size-fits-all did not do them any good. They were convinced that the development programme should consider schools managers and their schools as different from each other and attend to their challenges differently in order to reach out to all trainees.

**Impact of effective curriculum management**

This key finding emerged as an answer to question on 'how can curriculum management be used to promote curriculum implementation in schools?' The study found that staff development, support systems and monitoring and evaluation have impact on the effective curriculum management. To thrive in turbulent and ever-changing environments that affects schools such as technology, global, politico-legal, social and economic environments leaves schools no choice for survival if they had to stay. They need to take drastic change to transform their schools environment for the better. Organisational development and school-based management approaches offer guidance that schools as organisations need to be transformed into learning organisations (Moloi, 2010, p.621). This is accomplished through the development of the school as a structure and its human resources through staff development. The concept of learning organisations promotes school's relationships in which on-going teacher and learning is complementary to student's learning (Hayes, Christie, Mills & Lingard, 2004, p.520). The research participants valued the department initiatives on staff development through workshops and training sessions. They showed regard to full programmes offered at universities and colleges on the basis of their duration and impact on the performance of learners. It was particularly spelled-out that university and college programmes managed to change teachers' attitudes towards mathematics, science and commerce, improved their teaching commitment and relationship with learners, promoted their disciplinary, and pedagogical content knowledge and teaching and learning material development and improved their computer literacy competencies. Five of the research participants indicated that curriculum management and curriculum implementation could change for the best if all school managers are afforded opportunity to participate in SML development programme as students.

The school support system was found to impact on the effective curriculum management. The research participants indicated minimal to no support in some areas from DBE with respect to promotion of a culture of learning through curriculum management. This study is supported by Mashau, Steyn, Van der Walt and Wolhuter (2008, p.415) when they argue that far lying rural schools experience non-existence or unavailable support services to improve teacher-learner-relationships. However, SBMA which was adopted in South Africa advocates that schools should take full responsibility to see to it that teachers teach and learners learn. The Department of Education, through circuit offices, has to provide governance, management and leadership and curricular support all the times. Two research participants who were attached to primary schools indicated that there is no curriculum advisor for primary schools in their circuit. Teachers are on their own, without support with regard to curriculum implementation. This is a disturbing situation, because it implies that primary school teachers

in schools within these circuits are not receiving any curricular support. The lack of curriculum advisors also impacts on the development of e-learning material. Teachers still lack and need assistance, guidance and support. Since curriculum advisors serve as mentors to teachers, it means there are no mentors for some the circuits, and inevitably this creates inequalities because these services are available in other circuits. Furthermore, monitoring and evaluation of teachers' curriculum activities are compromised.

Monitoring and evaluation was found to have impacted on the effective curriculum management. Monitoring and evaluation in schools provides internal control where SMTs are able to assess, track and trace whether agreements and policies are being implemented. The research participants indicated that together with other SMTs, they are able to monitor curriculum implementation by checking teachers process as against pace setters; written work against written work plans and policies; teaching and learning against general teachers' personal time tables. Curriculum management is being monitored and evaluated by deputy and principals of schools who check whether the head of departments are doing their work. They check their monitoring tools and reports on curriculum management. In short, monitoring and evaluation help improve the performance of schools and learners. According to Tom Clark, the president of TA Consulting in the United States of America, monitoring and evaluation are used by organisations and governments worldwide to improve school systems and educational results, and can play an integral role in holistic education transformation (Microsoft in Education, 2014, p.5). He further highlights that monitoring and evaluation can help educational transformation programmes define and measure quality indicators and measures of the education transformation process, gauge progress toward desired educational outcomes, increase stakeholder participation, and empower school leaders and teachers to build and sustain transformation in schools.

**Lessons learnt from performing schools**

This key finding emerged when research participants were answering a question on 'what lessons could be learnt from performing schools in relation to promotion of culture of teaching and learning through curriculum management?' The study is summarised in the form of a framework on the promotion of the culture of teaching and learning. Underneath find the framework and its discussion.

***Promoting culture of teaching and learning framework*** (Source: Thaba-Nkadimene KL, 2016)

***Figure 1: Promoting culture of teaching and learning framework***

The figure above summarises the factors that are being influenced by improved curriculum management and culture of teaching and learning (CTL) in schools. In a report by DBE (n.d, p. 98) there is an indication that curriculum management culture is supportive of an effective learning culture. The study and the teaching framework emanates from a doctoral study by the principal author titled 'Lessons learnt from the implementation of school leadership and management programme by Universities in Limpopo Province, South Africa.'

It is the responsibility of SMTs to ensure that the culture of teaching and learning in schools is promoted. The aim of any school management and leadership development programme is to improve school management and leadership practice in schools. The improved SML positively affects curriculum management. In curriculum management, SMT are expected to plan, organise, monitor and evaluate curriculum implementation which involves teaching, learning and assessment. Effective curriculum management promotes a culture of teaching and learning. The improved culture of teaching and learning leads to sound classroom

practices that are displayed through improved pedagogical content knowledge, classroom readiness and preparedness, classroom management, reflective practice, socialisation, motivation, positive teacher attitude and commitment, and job satisfaction.

Furthermore, improved CTL was found to have a positive impact on general school discipline and extracurricular activities. Highly disciplined schools nurture learner success, boost their self-efficacies, and the changes of learners' uncontrollable aggression, bullying, violence and victimisation are minimal. Good school management and leadership results in effective curriculum implementation, which impacts on the CTL, school discipline and commitment to extracurricular activities which together promote learner achievement. It is not surprising for performing schools to be found possessing multiple success factors. According to a study by Hagegger (2008, p. 43) a positive school culture is the underlying reason why the other components of successful schools flourish.

**Key findings from document study**

The schools were categorised as A, B, C, D, and E for the sake of data analysis. The key findings revealed that school development, departmental and teaching and learning minutes, plans and policies are available in the five sampled schools. The exception is that there is no remedial work or activities for learners at risk. The difference was on the frequency and content of these activities or documents. School C was found to reviewing its plans and policies twice a month whereas Schools A, B, D, and E review theirs on monthly basis. The two weeks and a month periods were allowed for the purposes of implementation. The content within plans and policies differed per school. Nevertheless, the purpose, direction and strategies were stated in clear terms. The review was followed by remedial action in aspects which the expected outcomes were not achieved as planned. The remedial for learners at risk was not attended to by all the five sampled schools. The student at risk records were based on learners' orphanage; child-headed family; ill-behaviour; and learners with learning disabilities. Learners at risk per class, standard and subjects were not available. Document study revealed that the participated school principals highly commits to curriculum management and implementation.

**Conclusion**

Sound classroom practice, sufficient and suitable teaching and learning materials and sound pro-active school leadership are found to be factors that promote the culture of teaching and learning in schools. Staff development, support systems and monitoring and evaluation are found to have impact on the effective curriculum management. The performing school principals highly commits to curriculum management and implementation. Based on the stated key findings, this study concludes that effective curriculum management promotes culture of teaching and learning; school discipline; and commitment to extracurricular activities. The study recommends that the South African Department of Basic Education should ensure that school management teams and heads of departments in particular, are supported through responsive SML development programmes. Furthermore, it is recommended that the South African government should provide Wi-Fi connectivity to all schools in rural and urban communities, including deep rural areas of Limpopo Province where connectivity to any of Vodacom, MTN, Cell C's and Telkom networks remains a challenge. Lastly, DBE in collaboration with Universities should provide training of a new breed of teachers' support that assists schools in designing teaching and learning programmes. A responsive and differentiated school management and leadership

development programme is recommended to replace the current one which has adopted ‘one size fits all’ approach.

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## APPENDIX A
## Interview schedule

a. What are the factors that promote or impede the culture of teaching and learning in schools?

b. How can curriculum management be used to promote curriculum implementation in schools?

c. What lessons could be learnt from performing schools in relation to promotion of culture of teaching and learning through curriculum management?

## APPENDIX B
## Document schedule

School development; departmental; teaching and learning; and assessment and moderation; remedial for learners at risk minutes, policies and plans.

| | **Minutes** | | | **Policies** | | | **Plans** | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Availability** | **Frequency** | **Content** | **Availability** | **Frequency** | **Content** | **Availability** | **Frequency** | **Content** |
| **School development** | | | | | | | | | |
| **Department** | | | | | | | | | |
| **Teaching and learning** | | | | | | | | | |
| **Assessment and moderation** | | | | | | | | | |
| **Remedial for learners at risk** | | | | | | | | | |

# UKUTHWALA AND UKUBALEKA: IS THERE A DIFFERENCE IN TERMS OF THE ROLE IN EDUCATION?

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## ABSTRACT

This article explores the similarities and differences between *ukuthwala* and *ukubaleka* among the rural IsiZulu speaking people of KwaZulu-Natal and their role in education. The objective of the article was to understand the differences between *ukuthwala* and *ukubaleka* in terms of the role in education. The study is qualitative in design and within the context of gender. A total sample size of thirty (30) research participants was used for the study. The evidence for this study comprised of secondary literature and data generated from semi - structured and in-depth interviews, Focus Group Discussions, Life histories, and archival records. The approach of analysis by themes was adopted and data systematization was achieved by constructing coding frames for each of the data sets that emerged. It was found that there exist differences; for example *ukuthwala means* to carry off a girl for the purpose of marriage. Whereas, *ukubaleka* is the reverse of *ukuthwala* whereby a woman identifies a man she desires and elopes to his home of her own volition, thus placing pressure on him to pay *lobolo* to have her as a wife. Similarities also prevail both being the precursors to marriage among the IsiZulu speaking people of KwaZulu-Natal. It was also found that both *ukuthwala* and *ukubaleka* are centuries old which were not done in one dimensional manner, were handed down from generations to generations by word of mouth and only appeared on the archives when equated to abduction and were presented as violent acts. This forms the roots of the post 1994 legal debates related to the practice of *ukuthwala.* The article argues that both *ukuthwala* and *ukubaleka* have the negative effects on the educational attainment of a girl-child.

**Keywords:** *Culture, educational attainment, gender, ukubaleka, ukuthwala, young woman*

## INTRODUCTION

The aim of this article was to explore the differences between *ukuthwala* and *ukubaleka* among the rural isiZulu speaking people of KwaZulu-Natal and their role in education. The objective of the article was to understand the differences between *ukuthwala* and *ukubaleka* in terms of the role in education. The article tried to answer the following questions: What are the roles of *ukuthwala / ukubaleka* on education?

Much has been said about *ukuthwala* over the media in post 1994 South Africa and research with empirical evidence on the topic is scanty and amount to more than conjecture. Sometimes *ukuthwala* is confused with *ukubaleka*, sometimes *ukubaleka* is said to be another form of *ukuthwala* and sometimes *ukuthwala* is regarded as another form of marriage in Zulu and Xhosa cultures and same as *ukubaleka.* This causes a lot of confusion in understanding the phenomenon of *ukuthwala* which is a public debate in the context of democratic South Africa. Therefore, it is crucial that we understand the phenomena and their relationships if there are any.

Furthermore, *ukuthwala* and *ukubaleka* have negative effects on the educational attainment of the girl-child as children drop out from school, *ukuthwala* and *ukubaleka* contribute to high rate of learner absenteeism, Matriculation examination high failure rate, demotivation among teachers, lack of support from various stakeholders to mention a few. Yet not much has been done in research to investigate the roles of the two cultural practices on the educational attainment of the girl-child.

From the psychological point of view, the abuse of *ukuthwala* have effects on the psychological well-being of learners who are abducted and those who witness abductions and consequently are scared of going to school. Consequently, the practices grossly violate women's rights and perpetuate gender based violence and gender inequality in patriarchal Zulu communities of KwaZulu-Natal. Proponents of *ukuthwala* justify their actions on cultural custom, and yet this is confused with *umkhuba* (norm) and further confused with *ukubaleka*. Hence, this paper explores the similarities and differences that may exist in respect of *ukuthwala* and *ukubaleka* among the isiZulu speaking people of KwaZulu-Natal and their role in education. The aim is to educate people about the two phenomena to minimize confusion and ambiguity amongst people in general and to raise awareness that let not criminal activities be pursued in the name of culture.

*Ukuthwala* has for some time been looked at from a Western perspective as a form of gender based violence and women's rights violation, now it is the time to look at it from African perspective (Asante, 1988). Achebe (1985) in his novel *Things fall apart* enhances an African proverb and says "until lions have their own historians tales of hunt will always glorify the hunters" The proverb is indeed so to the African people that until we stand up to write and say this is our culture and this is how it is done, and separate criminality against culture, African people will always be seen as barbaric, a nation that violates the rights of women, we will be seen as chauvinistic, and these will be the reasons why other cultures are seen as dominant *in* the context of Democracy in particular.

Therefore, this paper first presents literature review as the springboard for the article then followed by research methodology, findings and conclusions are drawn as well as recommendations are made. On the basis of literature review and research findings the paper establishes similarities and differences between *ukuthwala* and *ukubaleka* on their role in education.

## LITERATURE REVIEW / THEORETICAL FRAMEWORK

Various studies (Msimang, 1991; Nyembezi &Nxumalo, 1995) reveal that both *ukuthwala* and *ukubaleka* are customs among the Zulu and Xhosa people. Karimakwenda (2013, p. 342) notes that *ukuthwala* "has different forms, not all of which are harmful to the woman, for example elopement". The practice is, in actuality, more common than is acknowledged and is found throughout Africa; Central, South and East Asia; and Eastern Europe. However, in contemporary times different meanings and understandings prevail in relation to the nature, processes involved and the reasons behind its practice. The practice of *ukuthwala* is perceived by some as gender based violence, whilst others see it as harmful cultural practice, whilst others perceive it as a custom and others see it as the abuse of culture.

Various earliest sources[1] prior to 1994 reveal that *ukuthwala* is a precursor to marriage of some Nguni speaking people in South Africa but has never been accepted as a normal social behaviour. They argue that the process involves a girl being *thwalwa'd* and placed in the care of womenfolk (i.e. old women who are the custodians of culture and her sister in laws) at the homestead of the prospective groom. Early morning of the following day *abakhongi* (*lobola* negotiators) are sent to the *thwalwa'd* woman's home to tell her parents to *funela nganeno* (look this side for your daughter is not lost, but *iganile* (has bethrothed). Her parents would then send a messenger to the *thwalwa'd* girl to find out if *lobola* negotiations can be opened (seeking a girl's consent). If she says yes, then *lobola* negotiations resume. It is important to note that a girl's virginity is not harmed during the *ukuthwala* practice until marriage is consummated, however, with the abuse of *ukuthwala* deflowering of a young *thwalwa'd* woman is the first thing that the abductor does. This is the gross violation of women's rights, bodily integrity and a gender based violence at its best which is strongly condemned in a democratic South Africa that prioritises human rights even above cultural rights. Furthermore, it is important to note that *ukuthwala* is arranged with the girl to be *thwalwa'd* in order for her to avail herself and pretend to be carried away by force. In some cases, where a girl is *thwalwa'd* against her will some research is done by the abductor about the girl to be *thwalwa'd* e.g. her times of availability, where to be found, who are her friends with whom the abductor can collaborate with in order to get hold of her; the abductor has to arrange *ukuthwala* with his own family as they would be expected to take part in the processes involved. On the same token, the abductor has to arrange *ukuthwala* with the girl's family beforehand to receive their consent, for if they did not approve the parents may ask that the girl be returned with immediate effect and that the girl would be unharmed.

According to Soga (1931, p. 271) "*ukutwala* [sic] is applied to two forms of abduction, to genuine cases of abduction by force, and also to fake cases of abduction" where the *thwalwa'd* woman collaborates with her sweetheart and pretends to be *thwalwa'd* against her will, hence she will not be looked down upon as a loose woman which is against her cultural expectations. Hence I argue that *ukuthwala* is a role play or per formative act, with role players and spectators. In whichever way the *ukuthwala* takes place, the "methods of compulsion exercised vary considerably in individual cases" (Britten, 1930, p.269). *Ukuthwala* can serve as a woman's agency to marry a man of her choice that she loves against the one chosen by her parents for her. "A girl can orchestrate her own abduction if her lover is not her parents 'choice for a husband" (Britten, 1930, pp.269–270). Various reasons prevail for *ukuthwala* be it initiated by a young woman or by a man. Britten states that *ukuthwala* can take place to bypass social conventions when poverty becomes the stumbling block for normal procedure to marriage. *Ukuthwala* may also be performed in order "to hasten marriage negotiations in situations of an unwanted pregnancy; it may be used to mark the seriousness of a young man's intentions; or in order to avoid the *lobola* fee" (Ntlokwana, 2011, p.4). Both Britten (1930) and Soga (1931) provide examples of the various strategic uses of *ukuthwala* for the various actors involved in the per formative act while de Jager (1971) only mentions it in passing as an "irregular" and "brutal marital custom".

[1] (cf. Britten, 1930; Soga, 1931; Schapera, 1946; Bryant, 1949; 1964; Hunter, 1961; Kriege, 1965; De Jager, 1971; Msimang, 1991; Nyembezi and Nxumalo, 1995; Tyrrell, 1996).

Post 1994 South Africa saw sensational wide media coverage[2] on *ukuthwala* in KwaZulu-Natal and Eastern Cape but none on *ukubaleka* as if it was not taking place at all. Soga (1931) argues that in Xhosa culture *ukubaleka* (elopement) is another form of *ukuthwala.* However, in Zulu culture, according to the earliest sources prior to 1994[3] *ukubaleka* is the process whereby a woman presents herself to a man's homestead accompanied by her age mates as a potential bride to be, thus putting pressure on an identified prospective groom to pay *lobola* with immediate effect. There is a gap in literature and in empirical research on *ukubaleka* in pre 1994 and post 1994 South Africa and much emphasis and focus is placed on *ukuthwala.*

Smit and Notermans (2015) for their part responded to Karimakwenda's (2013) assertion that marital violence is historical rather than a new phenomenon. They argue that "new types of violence are emerging as *ukuthwala* is being influenced by local social-cultural changes in combination with the national processes and events identified above, namely human rights discourses, violent forms of masculinity, changing economic policies and money and, finally, the HIV/AIDS pandemic" (Smit & Notermans, 2015, p. 34). Consequently, *ukuthwala* practice is further diversified by the interaction between local and national processes and events which Smit and Notermans (2015) argue it's "further muddying" what Nkosi and Wassermann (2014, p. 134) term "the growing grey zone of overlapping forms of *ukuthwala* in the process". Smit and Notermans (2015) believe that exploring how the various processes and events influence the local level may assist in understanding whether *ukuthwala* is being revived, changed/ and or reinvented. However, *ukuthwala* as a custom among the Zulus of KwaZulu-Natal has always been there especially in deep rural areas, has been practised and understood in this manner by the people on the ground although it has not been prominent and accepted as normal social behaviour. The real and correct *ukuthwala* is defined by absence of violence. On the same token, the abuse of *ukuthwala* "bride abduction" is centuries old just like the custom of *ukuthwala.* White authorities and governors did not fully understand the custom of *ukuthwala* same as the custom of *ukubaleka* which is used interchangeably with *ukuthwala,* hence the archival records are on bride abduction as per their interpretation and understanding of carrying away a young woman with an intention to marry despite the manner in which it occurred. Post 1994 *ukuthwala* is therefore not a re-emergence, but rather a continuity of *ukuthwala* and bride abduction which is re-imagined over time.

In the light of the above, it is clear that in *ukuthwala* and *ukubaleka* there are rules / procedures / regulations and principles that need to be followed that determine the *ukuthwala* and *ukubaleka* practices. Hence it is crucial to separate *ukuthwala* from the abuse of *ukuthwala* before any judgements are made about the *ukuthwala* practice. It also becomes clear that in Zulu culture *ukubaleka* is a custom which is different from *ukuthwala*. Whereas

[2] (cf Thulo, 2003, p. 3; Bhengu, 2005, p. 3; Nkosi, 2009; Sikhakhane & Ncalane, 2010, pp. 1-3;

Mfono, 2000; Molapo, 2004)

[3] (cf. Britten, 1930; Soga, 1931; Schapera, 1946; Bryant, 1949; 1964; Hunter, 1961; Kriege, 1965; De Jager, 1971; Msimang, 1991; Nyembezi &Nxumalo, 1995; Tyrrell, 1996).

in other cultures (e.g. Xhosa) *ukubaleka* is one form of *ukuthwala* which has different principles and procedures if compared to that of the Zulus.

The above literature is indicative of the fact that the issue of *ukuthwala* in contemporary Zulu communities of KwaZulu-Natal is never exhausted and continues with debate. Of paramount importance is the fact that there are silences around u*kubaleka* which is a custom that is often conflated with *ukuthwala.* Furthermore, the influences of *lobola* negotiations and bride wealth on present day *ukuthwala* practices are not featuring on the scene of scholarly debate and yet play a vital role.

## RESEARCH METHODOLOGY

The aim of this article was to explore the differences between *ukuthwala* and *ukubaleka* among the rural isiZulu speaking people of KwaZulu-Natal and their role in education. The objective of the article was to understand the differences between *ukuthwala* and *ukubaleka* in terms of the role in education. This paper emanates from a doctoral study on *ukuthwala* in KwaZulu-Natal which took place more than ten years and the researcher is an insider. The article is based on five years (2005 – 2009) and continuous data collection thereafter till 2013 of multi sited Feminist research methodology in a *ukuthwala* rural KZN province hotspots in Zwelibomvu, Bergville and KwaNgcolosi and their surrounding areas conducted by myself and two research assistants. The study is qualitative in nature. The fieldwork was conducted among the Zulu speaking people. Qualitative research methods that included participant observations, field note taking, semi-structured interviews, in-depth interviews, life histories (this method was used to elicit data on the interviewees' life experiences within their socio-historical contexts. A major reason that influenced my inclusion of this methodology alongside other methods is because I wanted to understand to what extent the participants' socialization process has an impact on the cultural practice of *ukuthwala* in their communities from childhood, through teenage hood, to adulthood and to old age); focus group discussions (Single Sex); case studies of abducted women and abductors and of abducted women who later escaped abductions were employed to elicit rich data.

At the initial stage of data collection pilot FGD (Single sex and mixed) were employed to identify hotspots and for re-appropriation of research questions. Apart from numerous informal conversations with key informants (colleagues from various rural areas of KZN and Eastern Cape), and key contacts in the identified areas which were purposively selected, I conducted thirty (30) semi –structured, in-depth interviews from men and women of the three research sites This method was appropriate for this study because it enabled the researcher to have direct personal contact with people in their natural environment, to personally understand the realities and minutiae of their lives (Denzine & Lincoln, 1998). Research sites were purposively selected as a result of data gathered from pilot FGD's and were identified as hotspots of abductions. Research participants were identified during FGD whereby participants mentioned the names of the people who were abducted in the research sites and consequently others were identified through snowballing technique of sampling whereby one participant mentioned the names of other potential participants (Denzine & Lincoln, 1998) and generated 30 (men and women) life histories from abducted women, abductors, abducted and escaped women, witnesses of abductions. Data through semi-structured interviews were also generated from local South African Police Services, Clinics, community leaders, school principals, teachers, and ordinary citizens. Four interviews were conducted per each research participant. IsiZulu language as the language of research participants was used to generate

data but later translated into English for report writing and for wider readership. All interviews and discussions were tape recorded, transcribed and translated. Ethical considerations were observed and pseudonyms were used for report writing. Research participants were told they could withdraw from the project at any stage or given point in time and were informed of their rights that they were not forced to be tape recorded. Some of the questions that guided the major project were: What is *ukuthwala?* How is it done? These are the questions which I am trying to address on this article. While the general research approach was interpretive, participants' experiential narratives were also informative and instructive. Thematic content analysis and synthesis was utilised ((Brewer & Hunter, 1989).Participants' experiential narratives were separately and collectively analysed and synthesized. The fact that all findings were consensually validated by multiple methods of data collection (Brewer & Hunter, 1989) to provide rich opportunities for cross-validation and cross-fertilization of research findings, from various research sites, issues of trustworthiness were taken care of and provide reassurance about the authenticity and integrity of the research as a whole.

## RESULTS AND DISCUSSION

The findings of the study are based on sentiments expressed by school learners (above the age of 18) and members of the communities under investigation. There was only one main theme that the researcher could ascertain from the data generated in the field and that is ***learner deprivation of educational opportunities.*** This will be discussed in relation to *ukuthwala* and *ukubaleka* which were constantly used interchangeably. In the following sections the researcher discusses the main theme based on the participants' views on the role of *ukuthwala / ukubaleka* on education.

### (i) Participants' views on *ukuthwala*

The findings revealed that the age old customs of *ukuthwala* and *ukubaleka* among the Zulus of KwaZulu – Natal are still vigorously practiced in deep rural areas and in some urban areas despite the assumption that they faded away. Furthermore, findings revealed that the abuses of the custom of *ukuthwala* (bride abductions) are also predominant in these areas. As indicated by Zonke who says that:

[*Ukuthwala* is happening to most people. A boy came to report that he wants to pay *ilobolo* towards my daughter but she is refusing. We agreed that he must *thwala* her.]

The above assertion is an indication of the abuse of *ukuthwala* (bride abduction) which violates women's rights. It is also an evidence of some parents collaborating with the abductors in exchange of *lobola* due to poverty. *Ukuthwala* is taken as a normal social behaviour as Zonke is saying it is happening to most people. Furthermore, the above is indicative of the fact that a boy firstly approached a young woman and informed her that he wants to pay lobola towards her, but the woman refused. It is upon that reason that he decided to approach her mother who agreed to connive with the abductor thus neglecting her daughter's feelings, emotions, and freedom of choice. The above also gives one of the reasons why *ukuthwala* takes place. On the other hand sometimes a boy abducts a girl without even having intention to marry her as Sabelo explains:

It happens that a man *thwala' s* a woman just to abuse her. He is not even prepared to pay *ilobolo for* her. He sleeps with her and then abandons her afterwards without paying her parents *ilobolo*. If a man *thwala's* a woman then pays *ilobolo* for her, that man is honest. It happens that after *ukuthwala*, the woman develops love for her man who *thwala'd* her, only to find that the man was just using her and had no intentions of marrying her. Then a woman becomes a laughing stock in her community when she returns home after she was *thwalwa'd*.

The above is indicative of women being subjected to male domination and oppression and violation of women's' rights in the name of culture.

Research findings in relation to the meaning of *ukuthwala* practice confirm views held by Msimang (1991); Nyembezi &Nxumalo (1995) that *ukuthwala* is a centuries-old Zulu custom that opens up the marriage negotiation process, and it means 'to carry away'. All thirty (30) research participants in all selected rural areas unanimously told me that *'ukuthwala isiko kithina maZulu'* (*ukuthwala* is a custom among the Zulu). Research participants insisted on that *ukuthwala kunye nje vo!* (There is only one form of *ukuthwala*) which has traditional elements as described by Msimang (1991). I was told anything beyond that is the abuse of *ukuthwala* as indicated by the following case of Xoli:

Xoli
On the way to school from home, I noticed a car …When I was close to the car, five men came out and grabbed me with my clothes and arms. I got shocked and lost control. I started crying. They twisted both my arms and carried me away to my abductor's home where I was made his wife when he slept with me…

The above case indicated the abuse of *ukuthwala* and gender based violence on school going girl-children. All research participants indicated that currently some men practise *ukuthwala* in a way that is contrary to traditional *ukuthwala*, and they believe that this constitutes rape (that is, contemporary *ukuthwala*). It is this form which participants referred to as *'ubugebengu'* (crime). In addition, it is this form of *ukuthwala* that is termed 'bride abduction' by human rights activists, feminists, gender activists, and by legal practitioners (CGE, 2009).

### (ii) *Participants' views on ukubaleka*

Research revealed that *ukubaleka* is the synonym for *ukuyodla izinkomo* (to eat cattle) and *ukuma* (to stand). However, *ukubaleka* is used interchangeably with the 'correct' form of *ukuthwala* which has traditional elements and follows the right procedures as indicated by Msimang (1995).

In most cases everything is planned accordingly before a woman is taken away. Reasons could be that the new lover sees *inkawu idlala ngesikhwebu* (the literal meaning is that the monkey plays with the corn). The actual meaning is that his competitor is undermined and viewed as not being the right match for the woman. This statement was frequently encountered, in the field as highlighted by Nokwazi from Zwelibomvu:

***Nokwazi***
*Ukuthwala* is from the saying '*isikhwebu sidlala inkawu'* (the monkey is playing with the corn). This phrase implies that the couple does not match, the woman being too good for the man, and thus he does not deserve her, but the new lover views himself as a good match for

the woman. In most cases the man knows who the 'monkey' that is playing with the corn is. He therefore decides to *thwala* the woman.

The above account by Nokwazi indicates the gendered language used to refer to a woman as 'corn' (something to be eaten), and as something to be played with. In gendered terms, this is an indication of women being seen as 'objects belonging to males' in patriarchal societies.

The evidence presented above also indicates that *ukuthwala* is sometimes used to match the right couple in cases where the woman's lover is seen as not the right match for the woman. On the other hand a woman can initiate *lobola* negotiations through *ukubaleka* (presenting herself to the home of the man she loves thus placing pressure on him to open up marriage negotiation process. In most cases this is confused with *ukuthwala.* I found that sometimes participants were talking about *ukuthwala* and yet describing the ukubaleka process. To me it became clear how complex the phenomena of *ukuthwala* and *ukubaleka* were even to the community members who happen to be the sons and daughters of the soil.

According to the FGDs**,** *ukuthwala* happens when a man loves a woman or when a woman loves a man. They may just engage in *ukuthwala / ukubaleka (elopement)* without even having started by courtship. This view confirms earlier views by Msimang (1995) on asserting that sometimes, it happens when a man was still engaged in courtship, and the woman has not accepted him, or has not spoken to him to indicate whether she loves him or not, suddenly the man decides to *thwala* her.

The above narrative is an indication of women abuse and GBV, as women are sometimes waylaid and consequently find themselves in a nuptial bed with a total stranger. The fact that she has not agreed means it is against her will; therefore, it is a violation of her rights to choose her own husband. The man may *thwala* a woman because she refuses to love him.

On the other hand Nontombi explains how she *balekela'd* her husband. This is what she said:

Nontombi

[My parents and my brothers are deceased. I stay with my aunt at Sgumbuqwini who assists me to go to school. She is also a learner at Nothinta High School at Ntaka.]… I then decided to *balekela* him because he was wealthy and I saw I will live a better life.

The above is an evidence of poverty leading to ukubaleka by a young woman with a hope that her future husband will look after her and therefore, will live a better life which she could not afford as an orphan.

Whilst, Zodwa, says *ukuthwala* is arranged with the girl concerned and the girl avails herself to a man whom she loves. This is what she says:

***Zodwa***
So many people take *ukuthwala* literally whereas it is not the case. It is arranged with the woman who will be *thwalwa'd* who then avails herself. The question we need to ask ourselves is: do men who *thwala* women enter the woman's house and take her out of her home, the answer is no, men find a woman somewhere.

The above is an indication that in other instances of *ukuthwala* a woman avails herself. Hence there is a very thin line between *ukuthwala* and *ukubaleka* (elopement) as other cultures such as Xhosa, Swati, and Sotho, to mention a few talk of *ukubaleka* as a form of *ukuthwala.* For the discussion that follows I will discuss both phenomena under one umbrella of *ukuthwala* and their role in education.

### (iii) *The role of ukuthwala and ukubaleka in education*

Bride abduction as a barrier to learner attainment of educational opportunities seemed to be a recurring theme that emerged from the data.

#### *Absenteeism*

For instance, one principal mentioned that girls were afraid to go to school for fear of getting abducted. *"Girls were afraid to go to school"* says Hlongwa. This resulted in a high level of absenteeism which impacts negatively to the teaching and learning process, and resulting to high failure rate in their schools. Dellasega and Nixon (2003) noted that victims of violent behaviour suffer feelings of anxiety, insecurity and fear. Further, skipping classes or staying home out of fear of being bullied at school leads to academic underachievement where learners fall behind in their assignments, homework, tests and assessments (Bemak & Key, 2000).

#### *High Failure Rate in Matriculation Examination*

Principal 2 says that "in 2000 and 2001 girls were abducted before they could write their matric exams, but after intervention by the Department of Education, girls are abducted immediately they finish writing matric". As a result, the matric results dropped from an average of 90 per cent to 36 per cent (Department of Education, 2002). The above indicates that intervention by the Department of Education is minimal.

#### *Low Teacher Morale*

In this regard, one teacher said "*Teachers are de-motivated including me. I am also fed up… am really, really fed up… this has led to low performance by learners and by teachers in the classroom".* The above indicates that low teacher morale can be a contributory factor to the underachievement of learners at school.

#### *School Dropouts*

One Principal of another community indicated that girls are abducted at an age of 11 years. They leave school and at a later stage come back (if the abductor agrees) but with a series of problems such as fear and anxiety. Another teacher stated that the abducted learner suffered from low self-esteem and was underachieving in her academic work due to the lack of full concentration in class. All of the above point to learner deprivation of educational opportunities due to *ukuthwala* and *ukubaleka.*

## Conclusion

This article has discussed the differences between *ukuthwala* and *ukubaleka* among the rural isiZulu speaking people of KwaZulu-Natal and their role in education. The objective of the article was to understand the differences between *ukuthwala* and *ukubaleka* in terms of their role in education. In doing so, the article tried to answer the following question: What are the

roles of *ukuthwala / ukubaleka* on education? The study therefore, concludes that there exists a grey area between *ukuthwala* and *ukubaleka* among the Zulus of KwaZulu-Natal. As a result a very thin line exist in the role played by the phenomena in education as both proved to have negative effects on the education of a girl child. The difference is that with *ukubaleka* a woman has a choice on her educational attainment as compared to forced *ukuthwala* where she is forced to marry against her will. What is common is that whatever the practice might be (*ukuthwala* o *ukubaleka*) women are subjugated under male domination which places them in subordinate positions in patriarchal Zulu communities. Consequently this perpetuates the feminization of poverty by denying a girl child opportunities and thus compromising her development in education, personal growth and on her livelihood. The study recommends urgent intervention strategies by the Department of education in collaboration with various stakeholders to end the forced abduction of women. This will be the benefit of all members in our society.

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# EDUCATION, MOBILITY, UNCERTAINTY: REFUGEES IN RECEIVING COUNTRIES' EDUCATION SYSTEMS

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## Abstract
Sixty Million people worldwide are fleeing from their countries of origin for various reasons – the highest number ever registered by the UNHCR. Not only does the human right of education apply to refugees as well, but education is also a vital tool to cope with displacement, to reduce inequalities, to ensure social cohesion, and it is relevant for development issues. Apart from simply granting the right of education, it is important to provide refugees with opportunities of success in education and in life, in spite the adverse circumstances. How are receiving countries' education systems coming up to these demands? This paper examines this question from the perspective of different receiving countries around the world. A particular focus is placed on the German case study of the ongoing project 'Multi-country Partnership to Enhance the Education of Refugee and Asylum-seeking Youth in Europe'. The project is one of the initiatives of SIRIUS – the European Policy Network for the Education of Children and Young People with a Migrant Background. The findings of this project and the lessons learnt are not only important for European countries to better accommodate the currently high numbers of refugees in their education systems, but also for other countries and regions of the world. The non-connectivity of educational attainments from one country in the other significantly hinders refugees' progress and success in educational endeavours and contributes to the multiple hardships they are facing as displaced persons. It is therefore essential to find joint solutions for improving future chances of young refugees and asylum seekers.

**Keywords:** Education systems, mobility, refugees, uncertainty.

## Introduction
Global mobility is a phenomenon of present times. For various reasons it is particularly relevant for refugees and asylum seekers who often do not remain at one place for a long time but between different countries or return to their countries of origin. Current numbers of refugees are as high as never before. Education is a vital tool to cope with internal and external displacement and for strengthening human rights and fundamental freedoms. Periods of no schooling and the non-connectivity of educational attainments from one country in the other significantly hinders refugees' progress and success in educational and life endeavours and contributes to the multiple hardships they are facing as displaced persons. It is therefore essential to analyse the educational situation of refugees in different national settings in order to find joint solutions for improving future chances of young refugees and asylum seekers.
This paper provides an overview of the situation of the education of refugees worldwide. This is done by first presenting some basic figures on refugee flows; this is followed by a discussion of the current debates about issues of refugees. The importance of education is then discussed and the recognition and specification of such in international agreements is outlined by the respective provisions. A further section presents international findings on the realities of access and quality of education for refugees. The paper closes with a discussion of the first findings of a case study that was conducted in Germany during the time when large

numbers of refugees had arrived in Germany (first half of 2016) and of whom many are children. The diverse challenges that come with this situation on the part of refugee students and on the part of the education system are subject of the discussion of this case study.

## 1 Refugees worldwide and in Europe

An unprecedented 65.3 million people around the world have been forced from home. This is the highest number ever registered by the United Nations High Commissioner for Refugees (UNHCR). Among them are nearly 21.3 million refugees[4], over half of whom are under the age of 18. There are also 10 million stateless people who have been denied a nationality and access to basic rights such as education, healthcare, employment and freedom of movement (UNHCR, 2016a). Worldwide, nearly 34,000 people are forcibly displaced every day as a result of conflict or persecution. Over half of them are from Syria, Afghanistan and Somalia. Most refugees remain in the camps, towns and villages of their neighbour countries, e.g. Turkey, Pakistan, Lebanon, Iran, Ethiopia, Jordan, Bangladesh, Thailand, Libya, Uganda, Sudan or Kenya. Most displaced people are hosted in the Middle East with North African and Africa (see Figure 1) (UNHCR, 2016a). Before the background of the current heated debates and media attention on issues of refugees in Europe, it has to be noted that none of the ten countries that have taken in the most refugees are members of the EU. 86% of the world's roughly 60 million refugees, Internally Displaced People (IDPs) and asylum seekers remain in developing countries (King, 2016, p. 18/19).

Figure 1: Figures on displaced people, countries of origin and top hosting countries by UNHCR. Source: UNHCR, 2016

Nevertheless, the current refugee influx represents the largest population movement for Europe since World War II (WWII). The mass movements of millions of refugees after WWII was one of the origins of the Universal Declaration of Human Rights (UDHR) of 1948, which includes the right to leave and to return to one's country, and the right to seek and enjoy asylum from persecution in other countries (Articles 13 and 14), and of the UN's International Refugee Organisation of 1946, which became the UNHCR (King, 2016, p. 19).

[4] An asylum seeker is a person who has sought protection as a refugee or for the granting of asylum, but whose claim for refugee status or for asylum has not yet been assessed. Every refugee has at some point been an asylum seeker.

In 2013, the number of asylum seekers started rising in Europe with an unprecedented peak in 2015. Large numbers of asylum applicants are of rather young age (below the age of 18) and in need for schooling (see Figure 2) (UNHCR, 2016a).

Figure 2: Asylum applicants in Europe (including the EU) up to 34 years of age from 2008-2015. Source: Eurostat, 2016a

## 2 Importance of education

Education is critical to strengthening respect for human rights and fundamental freedoms, and to the promotion of understanding, tolerance and friendship among all nations (King, 2016, p. 19). For the context of refugees, education is a vital tool to cope with internal and external displacement, to promote mobility, to reduce inequalities, and to ensure social cohesion. Education provides a sense of continuity, and is important in equipping both adults and children with the skills and knowledge to succeed in new environments when resettled, and is vital to human development and protection (Mackinnon, 2014; Hathaway, 2005). The short term inclusion of refugee and asylum-seeking children into the educational system will have a long term effect on their social inclusion into other aspects of the larger society, such as in the labour market (Center for the Study of Democracy, 2012) in the case of their remaining in the country and on the development of their countries of origin in the case of their return.
Above all, education is a human right for all (see section 3). It is therefore essential to not only provide education to refugees as such, but to provide them with opportunities of success in education and in life, in spite of the adverse circumstances.

## 3 Provisions of education to refugees

Education is a human right and an instrument for realising other human rights. This is documented in several international agreements, such as:
Article 26 of the Universal Declaration of Human Rights (UDHR), 1948 states that “everyone has the right to education” and that “education shall be free, at least in the elementary and fundamental stages” with elementary education being compulsory and technical and professional education generally available and higher education being equally accessible to all on the basis of merit. Furthermore, it states that “education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among

all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace" (United Nations, 2015a).

Article 13 of the International Covenant on Economic, Social and Cultural Rights, 1966 equally recognises the right of education with the same understanding as Art. 26 of the UDHR and makes provisions for free and compulsory primary education to all and the general availability and accessibility of secondary education to all.

Furthermore, the Refugee Convention of 1951, Article 22 provides that "The Contracting States shall accord to refugees the same treatment as is accorded to nationals with respect to elementary education", "treatment as favourable as possible with respect to education other than elementary education and, in particular, as regards access to studies, the recognition of foreign school certificates, diplomas and degrees, the remission of fees and charges and the award of scholarships", "make higher education accessible to all, on the basis of capacity, encourage fundamental education as far as possible for those persons who have not received or completed the whole period of their primary education", pursue the development of a system of schools at all levels, establish an adequate fellowship system, and continuously improve the material conditions of teaching staff (OHCHR, 2016b).

The application of the above rights to children is further emphasised by Article 28 of the Convention on the Rights of the Child, 1989. Apart from the above provisions, Art. 28 provides that "States Parties shall take measures to encourage regular attendance at schools and the reduction of drop-out rates, …promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods. In this regard, particular account shall be taken of the needs of developing countries" (OHCHR, 2016c).

## 4 Realities of the education of refugees on the international level

Despite international provisions on the guarantee of quality education for refugees, the realities are different. Profound obstacles for the realisation of the fundamental rights related to access, mainstreaming, medium of instruction, certification, accreditation, progression, second chance education, and skills development remain, even where schooling is available for refugees (King, 2016, p.19).

### 4.1 Realities in regard of access to education

Of all school-age refugee children, roughly 50% per cent receive primary education and 25% get enrolled in secondary school, with only 1% having access to higher or tertiary education (UNHCR, 2016b). The factors accounting for these enrolment proportions include:

- exclusion from the national educational systems either because of national policy or available places,
- high cost of education (textbooks, school fees, transportation),
- distance, especially for those in rural areas where transportation may not be available or affordable,
- insufficient competences of the language of instruction,
- unavailability of documentation required for enrolment (evidence of elementary education, birth certificates),
- lack of capacity of specialized teachers and skilled personnel,

- low rates of primary education,
- opportunity costs of displacement seem to make short term benefits like early marriage better than long term benefits of secondary education,
- some cultural norms and practices like early marriage (UNHCR, 2015),
- In some cases, education is denied to refugees to discourage the in-flow of more refugees into a country and to encourage the repatriation of those already in a host country (Hathaway, 2005).

Barriers for secondary education barriers are generally higher than for elementary education. Some countries like Bangladesh do not allow refugees to access secondary education, while in other countries like Kenya, practical barriers like inadequate infrastructure, and legal barriers prevent many refugee students from access. For example, in Dadaab refugee camps in Kenya, there are thirty-three primary schools as against seven secondary schools (UNHCR, 2015), making the majority of those who finish elementary school not able to continue to secondary, technical or vocational schools. In European education systems, administrational issues and high entry requirements often represent barriers for entering higher tracks of secondary education. For lower tracks of secondary education, different models of language oriented classes for refugees and other newcomers aim to facilitate entry into mainstream classes but do not always prove to function well.

### 4.2 Realities in regard to quality of education and opportunities to succeed

Young refugees and asylum seekers arrive in host countries with varied backgrounds linguistically, ethnically, politically etc., and from different educational systems with varied educational levels, and sometimes no schooling at all, making them have different educational needs (Dryden-Peterson, 2015; Shalayeva, 2011).

In refugee camps, the major educational challenges are on a very basic level, including the lack of, or inadequate infrastructure like classroom blocks and furniture, lack of, or inadequate learning materials like textbooks, and lack of, or inadequate well supported and trained teachers in pedagogy and other essential skills for teachers. In mainstream schools in host societies, educational challenges and hindrances of refugees and asylum seeking children and youth include:

- school based discrimination which is reflected in the attitude of some teachers and school management (Dryden-Peterson, 2016),
- isolation and exclusion through racism, prejudice and xenophobia (Rzan et al., 2010),
- personal relationships or difficulty in making new friends, and sometimes limited opportunities in mixing with local children (Ryan et al., 2010),
- inadequate information about the school system (Ryan et al., 2010),
- difficulties adjusting to a new educational system, curriculum, and pedagogy (Bourgonje, 2010),
- lack of inadequate trained teachers to address the unique needs of refugee children, low expectations of teachers from refugee students (Benavot, 2016, pp. 34/35; Hathaway, 2005),
- inability of schools to connect with their prior schooling and guide students into new settings (Bourgonje, 2010),
- some not having group experiences; the experiences of trauma and violence contributing to difficulties of adjusting (Dryden-Peterson, 2015),

- prior educational experiences of refugees often involve sporadic and limited schooling, inadequate educational opportunities and poor instruction (Dryden-Peterson, 2016 and 2015),
- distinctions made between legal statuses and pending asylum procedures lead to uncertainty (Hathaway, 2005),
- language, as most refugee children get to school with no knowledge of the host society's language and often receive insufficient support for learning the host language. Sometimes, the availability and duration of language courses are insufficient, as in some Central European countries, where they are taught by volunteers and in reception centers (UNHCR Central Europe, 2016).

It has to be noted that some of the barriers in regard to access and quality of education and opportunities to succeed are related to the fact that the refugee influx is adding to already weak education situations in many countries and regions (King, 2016, p. 19). Also, non-governmental organizations (NGOs) who are very active in complementing governments for the educational services for refugees and asylum seekers rely heavily on external funding. Yet the manner in which they can access funds is inconsistent and thereby makes their support for the education of refugees inadequate (UNHCR, 2011; Hathaway, 2005). Other obstructive factors include the inability and unwillingness on the part of some public offices to fulfil obligations for the social inclusion of refugee and asylum-seeking children and youth and the lack of coordination between institutions and stakeholders (Center for the Study of Democracy, 2012).

### 4.3 What works?

To help tackle the educational needs of young refugees and asylum seekers, some essential practices are necessary. These include targeted policy and system support, commitment to social justice, a holistic approach to education and welfare, leadership, inclusive school systems and approaches, support for learning needs, cooperation among actors, and not to be concentrated together but distributed through the schools (The Economist, 2016; Bodewig 2015; Sidhu & Taylor, 2011).

Educational planning should further include refugee movements in education sector analysis and projections of needs for the education system, reviewing language and curriculum policy, reinforcing national capacities to avoid parallel systems, providing certification for learning attainments, and planning for refugee return (MacEwen, 2016). A skills audit together with guidance and counselling on available educational options are necessary to help refugees and asylum seeking children and youth understand suitable educational options and training, so as to make informed choices, together with access to secondary, vocational, technical, apprenticeship, and professional programmes (Bardak, 2016). Furthermore, training of teachers, volunteers and NGOs in handling multilingual classrooms and investments into schools are essential in enabling quality education for refugees (Bourgonje, 2010).

Secondary education for refugee youth should include an accelerated education for adolescents who have dropped out or who have never been to school, relevant technical and vocational training in basic, literacy and life skills courses (UNHCR, 2015). In some places, efforts are made to keep refugee students in school, like in Chad, where day nurseries were set up so teenage mothers could continue their education (UNHCR, 2016b). In the global

South, ‘education for repatriation’ is sometimes adopted with the curriculum based on refugees’ country of origin, with eventual return of refugees as the aim (Hathaway, 2005).
To help educate more refugee students at secondary school, the UNHCR formulated an Education Strategy 2012-2016, which its Action 3 states that ‘More young people will go to secondary school’. The strategy has the objective to improve access to formal secondary education opportunities for refugee young people, with an expected result of expanded secondary education to 1 million young people. To achieve this objective, measures such as supporting the costs of secondary school for refugees, teacher compensation, training, and retention, accelerated learning programmes, and supporting the professional development of those in charge of school governance have been introduced (UNHCR, 2012).

## 5 Case study Germany

The ongoing project ‘Multi-country Partnership to Enhance the Education of Refugee and Asylum-seeking Youth in Europe’, which is being coordinated by the author, analyses obstacles, potentials and good practices of the education of refugees and asylum seeking youth in Belgium, Bulgaria, Germany, Greece, the Netherlands, United Kingdom, and Sweden. These countries are some of the main transition and destination countries of recent refugee movements from Africa and Asia towards European countries.
The subsequent stage of the project will focus on policy dialogs: The findings will be discussed with policy makers, administrators and practitioners in international working groups with the goals of enhancing multi-stakeholder cooperation, drawing lessons from good practices and finding joint solutions for overcoming existing barriers and challenges in the education of refugees and asylum-seeking youth.
The project is one of the initiatives of SIRIUS – the European Policy Network for the Education of Children and Young People with a Migrant Background and is funded by the Mercator Foundation. First findings are here presented from the German case study.

### 5.1 The relevance of the project and the topic of refugee education in Germany

In 2015, over 1 million refugees arrived in Germany; estimated 300.000 of them were children. This makes Germany the country in Europe that received the most refugees by far (see Figure 3). Between January and May 2016, there have already been 100.000 new asylum requests by children, 10% of them were unaccompanied minors (UNICEF, 2016a, pp. 4/25). Most of them come from Syria, Afghanistan and Iraq, and many from Iran, Eritrea, Pakistan, Albania, Russia and Nigeria.

Figure 3: Numbers of asylum applicants younger than 14 years in Europe from 2008 to 2015 by countries. Source: Eurostat, 2016b

Whereas the German education system had been struggling to adapt to the educational needs of migrants, develop a culture that welcomes diversity and qualify teachers sufficiently to deal with multicultural classrooms, the newly arrived refugee children have been presenting a further challenge for educational institutions. Apart from an insufficient readiness of the education system for the new arrivals, asylum procedures, uncertain permissions to stay, housing arrangements and legal restrictions complicate the access to quality education for refugee children.

Especially in first reception centres, where refugees stay up to six months, access to education is not ensured. In one reception centre in Berlin, ca. 45 children out of 180 attended school in November 2015. Due to the lack of access to mainstream schooling, parallel structures develop in reception centres, e.g. courses organised by social workers or volunteers, which hamper integration into mainstream society (UNICEF, 2016b, pp. 4/12). The respondents of the project evaluation confirmed that the topic of education is of highest relevance in regard to the arrival and presence of refugees in Germany.

### 5.2 Theory of impact and methodology

The project is based on a theory of impact that assumes a two-fold problem: 1) an increased pressure on Member States to develop strategies for effectively integrating new arrivals into society through a rise in new arrivals. And 2) an insufficient understanding of the challenges that asylum-seeking and refugee youth face and inadequate transnational sharing of knowledge regarding potential solutions. This leads to inadequate access to quality education

for asylum-seeking and refugee youth throughout the EU. These assumptions were confirmed by the vast majority of respondents of the project evaluation.

Data collection included interviews (30) and focus groups (7) with teachers and head masters of schools, social workers, young refugees and asylum seekers, volunteers and administrators in two cities (Wuerzburg and Bamberg) in the Bavarian part of Germany. Most young refugees and asylum seekers who were being interviewed had at least been in Germany for six months and had reached a basic knowledge of German so that German could be used as the language of communication; some interviews were conducted in Arabic with recent arrivals from Syria. A further case study in the city of Hamburg is still being analysed. Reports from each country analyse the national-level findings. A comparative analysis creates clusters of countries based on structures, barriers and potentials, identifies good practices and formulates recommendations to practitioners and policy makers. It is hoped that the project outputs will 1) enable the project team to use the data, experiences and information generated by the project for the targeted information and counselling of policy makers and organisations involved in the education of refugees, and 2) lead to the stakeholders and policy makers involved in the education of refugees in the participating countries using the data, experience and information generated by the project and basing their activities for the education of refugees on them.

### 5.3 Access to education for refugees in Germany

For the time that refugees stay in first reception centres, they have the right for schooling but not the duty. This leads to many school aged children in first reception centres not attending school because they lack information about structures and possibilities of schooling, schools do not have to accept them and often reject them, they get moved between locations frequently etc. In a situation where refugees remain in first reception centres for up to eight months', these long periods out of school, which add to the time refugee children spent out of school during their refuge and before, leads to lasting effects on learning and overall development of the child.

In the Bavarian part of Germany, refugees from Balkan countries (Albania, Kosovo) and Morocco, have been transferred to so-called 'reception and return centres'. This is before the background that nationals of these countries have nearly no chance to be granted asylum or refugee status because Germany considers these countries as 'safe countries'. Speeded asylum procedures within these centres aim at an early return to the countries of origin. However, in many cases children had already integrated into mainstream schools and were taken out of school to stay in the reception and return centres where they often spend several months. Basically no schooling takes place in the centres.

For those being placed in accommodation centres in rural areas, access to education is very limited because the public transportation system in rural areas is not well structured and educational opportunities, especially for secondary and upper education are limited.
The lack of information represents a relevant access barrier for most refugees. So far there are no functioning structures to inform refugees to a degree where they can make informed decisions within the complexity of the German school system. Without the support of volunteer helpers, it is nearly impossible for parents and young people to find a place in an adequate and good quality school.

Apart from this, the capacities of schools as well as the teaching force are too limited to accept all refugee students who are in need for a place of schooling.
Age and status within the education system lead to further barriers. When young people are over 18 years, they are above the age limit for secondary schooling. Due to the fact that they missed years of schooling during their travel and before or due to the non-recognition of their prior degrees in Germany, they do not have the required degrees that would entitle them to continue with vocational or academic education. Educational opportunities for them to acquire these degrees through special courses are still quite limited and their admission into these courses also depends on their countries of origin.

**5.4 Quality of education and opportunities to succeed for refugees in Germany**

The issue of teacher qualification is a major one when considering the quality of education for refugees. It has been lamented that teachers in Germany lack the qualification to meet the diverse needs of students of different backgrounds, to teach German as a second language throughout all subjects, to sufficiently foster the different talents of students and to create a learning culture that values and welcomes diversity. The arrival of refugees has posed further challenges on teachers in this scenario. Not only do classrooms now become more diverse than they had already been with increasing proportions of children with migrant backgrounds in Germany, but refugee students come with specific needs, e.g. regarding trauma, family separation, uncertainty about future prospects etc. which teachers are not prepared to meet. Many teachers feel overburdened with the challenges that they are confronted with.

Since it was recognized that more social workers are needed to assist teachers and pedagogues, additional staff was hired but does not necessarily come with the desired competences. This leads to an accumulation of problems in schools and accommodation centres. Especially refugee students with trauma find it nearly impossible to receive adequate treatment. Without treatment of such issues, students can not concentrate on studying and will not be able to make progress in education.

In many cases, the lack of translators leads to problems in communicating with parents and students and hinders the exchange about important issues of the child's educational career. Volunteers partly fill this void but their capacities are limited.
When students have difficulties keeping up with the pace in school or are in need of intensified German teaching, financial limitations hinder refugees to hire tutors or attend special courses. Therefore, they depend on volunteer tutors, as far as those are available, who often lack the knowledge about the specific requirements of schools and the competences for teaching and find themselves overburdened.

The living conditions in accommodation centers further hinder effective learning. There are no quite places for studying and doing homework and even the possibilities to find rest are limited; this leads to students being tired and unable to concentrate in school. Refugees who come with completed educational, vocational or even academic careers or competences in many cases find it nearly impossible to continue their educational or professional path on the same level. Three aspects are relevant in this regard: 1) When arriving Europe, most refugees do not carry any documentation with them and are therefore unable to provide evidence of prior degrees. 2) Due to restrictive laws, many foreign degrees are not recognised or not fully recognised in Germany. Processes of assessing the level of recognition take a long time and involve bureaucratic barriers that refugees often can not overcome. 3) In many countries of

origin, practical qualifications are acquired on the job and do not involve written documentation of competences. There are no structures in place so far to recognise such qualifications.

Uncertainty about the future is a big factor which impacts negatively students' ability to concentrate in school and focus on their educational career. Many refugees are living in uncertainty about the decision of their asylum request for long periods of time (several months and years); this decision determines their future prospects and being uncertain about it hinders them from making any long term plans for their education and life in general.

**5.5 What works and what should be done?**

On the basis of the interviews and focus groups conducted for the German case study, the following conclusions can be drawn on what works well so far and what remains to be done in regard of the education of refugees and asylum seekers in Germany.

Apart from specific demands within the education system, welcoming and accepting attitudes of Germany's population is considered to be a precondition for refugees' success in education and in life.

Functioning communication and cooperation between policy makers, school authorities, schools, social services and other actors involved in some way or the other in the education of refugees is essential. This is in consistence with MacEwen's (2016) emphasis on considering the whole system in the planning of strategies for the education of refugees.

This cooperation should also lead to the speeding up of processes of school placement, asylum recognition, stable accommodation etc. in order to minimize the periods of uncertainty for refugees. In particular, the speeding of asylum recognition is crucial for enabling refugees to plan their future and work for it in regard of their education. An area of well functioning cooperation is that between youth offices, accommodation and care centres for unaccompanied minors, schools and volunteers.

Apart from that, there is a pressing need to come up with strategies to recognise or at least consider refugees' prior degrees, qualifications and learning achievements. This would enable more efficient learning in educational institutions, a higher level of satisfaction, well-being and personal progress on the part of refugees and the avoidance of the investment in resources for assigning refugees into educational institutions and courses that transfer knowledge that they have already attained in their countries of origin. The actual state of competences within their educational biographies should therefore be assessed right from the beginning in order to find suitable places for each person to proceed their learning and professional path from where they stopped. Bardak (2016) suggests a skills audit in this context and calls also for providing refugees with the necessary information about the education system and different options in order to make informed choices about their educational careers and futures.

In this context it is important to consider that language is important for progress in the educational career but should not be a marker for intellectual development and the state of competences. Hence, real competences need to be assessed irrespective of language skills.

Furthermore, there is a need for additional well trained social workers, cultural mediators and translators. Social workers can disburden teachers and assist with the special needs of

students. Social works or therapists are further needed for helping refugee students with issues of trauma. Cultural mediators are necessary in order to ease the coexistence of different cultures, religions and value systems in the school and avoid conflicts. Among others, it would be necessary for cultural mediators to discuss with Muslim students how they can reconcile Ramadan fasting and school obligations and how they can come up to the expectations of the German value system and laws while not giving up the values of their own religion and culture. Translators are necessary for the clarification of important issues relevant for education and everyday life but so far, funds are lacking in most cases to pay for their services. Teachers, furthermore, need to receive targeted in-service training in order to qualify them for teaching German as a second language and for dealing with the diverse cultures, religions and needs of students. This is in accordance with Bourgonje (2010) who stresses out the importance of well-trained staff for the specific education needs of refugees.

What functions quite well so far is that refugee students relatively soon after their arrival get placed in German language classes in order to prepare them for the German school system. Furthermore, the preparation for the labour market within vocational schools in close cooperation with potential employers is considered to be well functioning.

**Conclusions**

It is obvious that much remains to be done in regard to granting the rights of education to refugees that are provided in international conventions. Granting these basic rights is not only conducive to the well-being of refugees but also to the well-being of societies.

It has also become clear that challenges in the education of refugees are not only an issue of countries in the global South but also in Europe. Besides pointing out barriers for access and quality of education, this paper has attempted to outline some functioning approaches and some action points.

At the same time mobility is a global phenomenon whose scale has been rising tremendously and is expected to continue its rise. Conflicts around the world further justify the expectation that large numbers of people will continue to be forced into fleeing their homes and seeking refuge in safer places. Education is a vital tool for them to deal with and overcome adversaries. It is therefore necessary for scientists to investigate further into the educational needs of refugees, to enter into dialog with different stakeholder groups on the national and international level to find joint solutions and strategies for meeting the diverse educational needs of refugees, and for policy makers to create the conditions and frameworks where these strategies can be implemented.

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# STAKEHOLDERS' PERCEPTIONS ABOUT TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING COLLEGES IN SOUTH AFRICA: A LITERATURE REVIEW

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**Abstract**
The TVET colleges in South Africa were established as a process of transforming the education system to respond to the skills demand of the South African economy. The sector was also intended at aligning what the colleges offer with the needs of the job market. Despite this good endeavour, and intense continuous advocacy, the sector appears not to be accepted by stakeholders as anticipated. Therefore, the purpose of this study was to review literature on the perceptions of some stakeholders about TVET colleges in order to suggest strategies that can change such perceptions of the stakeholders. The study is based on human capital theory. The research design for this study is descriptive. The qualitative research approach was adopted for this study using literature review as data-gathering method. Views of different stakeholders were collected from literature. Qualitative content analysis was used to analyse the data. A review of literature revealed that some stakeholders have positive perceptions about these colleges while other stakeholders perceive the colleges negatively. Stakeholders who perceive the colleges positively regard them as institutions of first choice, they are route to preferred career and have practical focus and they serve as progression route to higher education. The colleges are perceived negatively by other stakeholders because they do not provide employment after completion of the courses, students lack workplace experience, low-quality curricula and output and delayed results and course certificates, an unclear post-school articulation system, and perception of TVET colleges as second- and third-choice institutions.

**Keywords:** Technical and Vocational Education and Training colleges; stakeholders; skills demand; perceptions

## 1. Introduction

Technical and Vocational Education and Training (TVET) colleges, although a well-known concept in the rest of the world, it is a relatively new concept in South Africa (Nzimande, 2013, p.2). The TVET colleges are a post-school provision that were previously called Further Education and Training (FET) colleges. They were initially technical colleges (Powell & McGrath, 2013), which were commonly known as "ambagskole" (trade schools) in South Africa. The name change from FET to TVET was done to align South Africa with international practice (Human Resource Development Council of South Africa (HRDCSA, 2014). It also signals the importance of integrating formal education with practical training and aligning these to the requirements of occupations (Nzimande, 2013). TVET also broadens the vocational education colleges to include "national social and economic growth and development, poverty reduction, employment creation, unequal income distributions, sustainable livelihoods, youth development, innovation and quality education and training programmes in the democratic developmental state" (HRDCSA, 2014, p. 24). The colleges are pivotal in the government's mission to address skills shortages and mismatches, as well as helping young and less skilled to access jobs (JET Education Services, (2014).With the

enactment of the FET Act in 1998, the colleges were restructured and programmes transformed to respond better to human resources, economic and development needs of the republic of South Africa (Department of Basic Education (FET), 1998). Despite these initiatives, the sector experienced some challenges during the early years of its inception, such as low lecturer morale, loss of lecturers and high vacancy rate, low student enrolment rates, poor learner performance, institutional and labour instability and several financial difficulties (e.g. parity of salaries) (Nzimande, 2013**).** The challenges invited criticisms from some stakeholders.

In order to address some of these challenges, the Department of Education came up with some measures: bursaries are offered to students through the National Student Financial Aid Service, partnerships are forged with Sector Education and Training Authorities (SETAs), e-learning facilities have been introduced at some of the colleges, and apart from some colleges being South African Bureau of Standards International Organisation for Standards (SABS ISO) 9001:2008-certified for courses at TVET colleges to be externally and independently quality assured, the courses offered are quality-assured by UMALUSI (Public FET Colleges South Africa, 2014).

The sector was rebranded and the colleges were transferred to the DHET. The department came with a turnaround strategy to address the key challenges which include low throughput rate, lecturers qualifications, industry linked experience, student support services, curriculum, infrastructure (Department of Higher Education, 2006; JET Education Services, 2014). The measures were meant to robustly support and advocate the sector so that the colleges are revitalized and become institutions of first choice and challenge the widespread perception that the colleges are poorly resourced second choice institutions,

The above measures notwithstanding, some stakeholders appear not to be accepting the TVET colleges. This study therefore reviewed literature to investigate the perceptions of stakeholders about TVET colleges. The research question in this study reads as follows:

- What are the perceptions of stakeholders about Technical and Vocational Education and Training Colleges in South Africa?

The aim is to examine the perceptions in order to suggest intervention strategies that can be used to address the negative perceptions by some stakeholders?

It was indicated previously that the Vocational Education (VE) sector underwent name changes. Currently different concepts are used such as Vocational Education and Training (VET), Further Education and Training (FET) and Technical and Vocational Education and Training (TVET) to refer to vocational education (Cameron & O,Hanlone-Rose, 2011, Human Resource Development Council of South Africa, 2014). In this paper these concepts are used interchangeably as if they are synonyms.

## 2. Theoretical framework

This study was grounded on human capital theory as indicated in the abstract of this paper. The human capital approach can be traced back to the Industrial Revolution and the philosophy of productivity (Mahupe & Rasool, 2014, p. 15). The basis of human capital theory is reported differently by different sources. Some authors believe that human capital theory was formulated by a noted economist, Adam Smith, in his book *The wealth of nations.* (Library of Economics and Liberty, n.d.). Others trace the development of the theory to the

work of Sir William Petty and William Farr (Litigation Analytics, 2015) and popularised in the works of David Ricardo and Karl Marx in the 19th century and John Maynard Keynes and Milton Friedman in the 20th century (Library of Economics and Liberty, n.d.). The proponents of human capital theory postulate that human beings are an investment that generates a return. When applied to education, the theory postulates that formal education is instrumental in improving the productive capacity of a population, and formal education is seen as an investment in human capital (Almendarez, 2010). This theory is relevant to this study, as VET is understood in economic terms based on two assumptions, namely that productivity leads to economic growth (skills growth), and that this leads to employability and ultimately to job opportunities (Powell & McGrath, 2014). The proponents of this approach further contend that the purpose of TVET is economic productivity and that colleges should be focused on skills development for employability by preparing graduates more directly to meet the demand and needs of the labour market. The criticism of narrowness that followed the inception of this programme led to its expansion to include the role of TVET in alleviating poverty and promoting social welfare as a basis for promoting growth and human security (HRDCSA, 2014, p. 15).

## 3. Methodology

A qualitative research methodology was used in this study. According to Savin-Baden and Major (2013, p. 11), "qualitative research, also called naturalistic enquiry, is a type of research that developed within the social and human sciences and refers to the theories of interpretation (hermeneutics) and human experience (phenomenology)".

Of the main qualitative research instruments, namely interviews, observations and literature reviews, this study used a literature review (documents analysis). In choosing the documents, the study was guided by the criteria for assessing quality documents, namely authenticity, credibility, representativeness and meaning, as recommended by Scott (cited in Bryman, 2012, p. 544). Since TVET colleges are a relatively new concept in South Africa, most literature sources included publications since the enactment of the FET Act in 1998 to date. The documents included government publications, such as legislations, sector reports, presentations, private sources and mass media outputs. Internet search was also performed to search for relevant sources such as research articles.

Qualitative content analysis was used as a method of analysing data. According to Bryman (2012, p. 557), qualitative content analysis comprises searching out underlying themes in the literature being analysed. Perceptions of the stakeholders reported in different literature sources were described. Those perceptions that related to each other were classified into components. The components formed themes which were used as research findings.

## 4. Research findings

After reading the different documents and related literature, it emerged that stakeholders have mixed perceptions about the TVET colleges. There are stakeholders that perceive the colleges positively. However, the broad literature on stakeholders' perceptions of TVET colleges is mostly negative.

### 4.1 Stakeholders positive perceptions about TVET colleges

*TVET colleges are regarded as institutions of first choice*

Literature sources indicate that as South Africa is faced with the shortage of critical skills, vocational education was seen by the government of the country as the best way to address this challenge. The FET Act of 1998 was therefore enacted in order to turn the FET colleges as institutions of choice (Seamus and Papier, 2011). It was indicated above (see 1) that the sector experienced challenges at its inception. The Department of Higher Education and Training acknowledges the challenges that the sector is facing. Some challenges are unfortunately historical facts that vocational education was used for rehabilitation and amelioration purposes for poor white male learners in the past (Ntlatleng, 2012). They also carry the stigma of being institutions for those who are not academically strong, those who are from very poor economic backgrounds, and those who could not be accepted to universities and university dropouts.

In addressing some inherited challenges, the sector was branded (refer 1 above). DHET ensured that courses are quality assured, assessment and certification is centralised and coordinated by the DHET, student support services are provided, and linkages (partnerships) with business are secured in order for the courses to be responsive to the needs of commerce and industry. And bursaries are provided to all the students including students with disabilities to ensure accessibility (Public FET Colleges South Africa, 2014; Nzimande,). As said previously (see 1 above), the intention was to revitalise the sector and make the colleges institutions of first choice in order challenge the widespread perception that the colleges are poorly resourced second choice institutions.

.TVET colleges as a route to preferred career and practical focus

In the study conducted by Seamus and Papier (2011), it was discovered that some students view vocational education positively as it leads to careers of their choice and that it is practical as compared to university education. The students further indicated that TVET colleges helped them to test their field and enable them to continue with careers which are near to their passion. In the same study other students indicated that they consciously chose FET colleges as institutions of first choice and that despite having qualified to go to university, they chose the colleges to do what is of interest to them. In their study on a new approach to the evaluation of VET, Powell and McGrath (2014, p. 8) cite City and Guilds as saying that FET college students are "without exception extremely positive about their vocational programmes". VET is also regarded by some students as superior as it has focus beside the practicals that are offered, as compared to the academic route followed by universities. This group of students further defend practical knowledge, which the critics regard as belonging to the poorly gifted, by saying that practical knowledge offers them a sense of knowledge and makes it easier for them to access jobs (Seamus & Papier, 2011).

*TVET colleges viewed as progression route to higher education*

Available research suggests that students view TVET colleges as a route to university. TVET colleges admit students from various backgrounds and qualifications. The students include those who passed Grade 9 and were advised to follow the vocational education sector because of their poor performance. It also includes those learners who could not pass Grade 12 well, though this was their initial intention so that they can access university. Some of these students follow vocational education stream in order to access higher education of academic qualifications. TVET colleges are therefore positively perceived as the only accessible

institutions which assure them progression route to other institutions of higher learning**.** In a research conducted by Seamus and Papier (2011:39), one student was quoted as having said that "some of us would like to go to university next year." The students therefore registered at TVET colleges in order to access higher education.

Despite the positive perceptions, other stakeholders have negative perceptions of the TVET colleges

## 4.2 Stakeholders negative perceptions about TVET colleges

*Unemployment and lack of workplace experience*

This was the main finding and probably the most critical. *City Press* (2012) reported that FET college students face tougher battles for jobs as compared to their peers at tertiary institutions such as universities. In this regard, *City Press* (2012, p.1) quotes a student as having said, "You come to an FET college looking for a better future for you and your family but … there is quite a lot of sadness and disappointment". The problem of unemployment is exacerbated by the fact that the new NCV programmes do not necessarily lead to a job. The colleges have poor image, with some employers claiming not to understand the NCV programmes. The employers claim not to understand the relatively new NCV programmes especially regarding their students' admission requirements, their workplace period during years of study and their certification system. These result in only a minority of the college graduates accessing jobs. As stated by the FET Round Table (2010, p. 55), lack of employment opportunities leads to some students taking on employment that is not related to what they studied.

Related to the problem of unemployment is the challenge of lack of work experience. Research indicates that there is a strong and significant relationship between work experience during studies and subsequent employment (Gewer, cited in FET Round Table, 2010). Although colleges are expected to provide practical experience on their premises, some colleges are ill-equipped to offer the required experience. The Skills Development Amendment Act (2008) requires that an NCV student who completes the programme should complete a period of prescribed work experience before sitting for a trade test. A college graduate is in this regard quoted as having said, "If we do not have practical experience, it is the same as having nothing" (City Press, 2012, p.1).

In order to address the issue of work experience the DHET encourages colleges to have partnerships with SETAs. Many colleges are running SETA-funded occupational programmes. The SETA programmes are believed to have significant labour market currency, their importance being that they are directly linked to employer needs and generally involve work placements as part of the programme, for example artisan programmes. They also contribute a significant part to income at some colleges (Nzimande, 2013). The SETAs are, however, criticised for delayed certificates (see below).

*Low-quality curriculum and low output and delayed results and course certificates*

In South Africa, the curriculum offered at the colleges is perceived by some stakeholders as being of low quality. According to McGrath (2004.), the FET college sector's weak response to the needs and realities of the labour market is widely criticised. Closely related to the issue of responsiveness is the issue of employability, which implies that the colleges should be doing more to improve labour market outcomes. As stated previously (see 1 above), the purpose of establishing FET colleges was to offer programmes that will respond to the skills

demand of the South African economy. However, there are strong views that the curriculum of the new NCV programmes in particular is not aligned to the needs of industry (FET Round Table, 2010, p. 55). The problem of a college curriculum and employer needs mismatch is not only experienced in South Africa. It is reported in literature sources that in many nations TVET curricula have lost their relevance to the requirements of the labour market (Maclean & Lai, 2011). Reasons for this state of affairs differ from country to country. Studies conducted in China (Maclean & Lai, 2011) reported that the irrelevance of the curricula is ascribed to, among other factors, employers who prefer to employ untrained youths or academic graduates who will undergo on-the-job-training. Another study conducted in Australia by Cameron and O'Hanlon-Rose (2011) reported that TVET colleges are criticised for the structural mismatch between job requirements and skills. It is also reported that globally TVET colleges are under enormous pressure to close the gap that exists between what they offer and what industry requires (see Cameron & O'Hanlon-Rose, 2011).

The colleges are also criticised for poor performance, delayed results and certification, and resultant low output. Having worked in the FET college sector, the researchers observed that one challenge the colleges face is low pass rates, especially of the NCV students. The numbers would be high at entry, only to narrow towards exit. In addition, we experienced the challenges of delayed results. While some results are released late, other results will be pending. Delays in releasing the results affect the next registration and commencement of lessons. The cycle continues and ultimately has a negative impact on performance at the end of the term. The poor performance at the colleges leads to low throughput rates of students, which hamper the progression of students into the labour market. It further creates backlogs for students in the pipeline to go to the colleges. Access for large numbers of school leavers is therefore blocked (see also DHET, 2012). ). It is not only certificates of programmes offered by colleges themselves which are delayed. In instances where the SETAs offer programmes, it becomes problematic. SETAs themselves are criticised for delayed certification of students who have completed their placement for work experience. In 2015, it was reported that besides the course certificates that were reported outstanding (see below), there were also 34 247 SETA certificates outstanding. The blame is on lack of capacity at the state Information Technology Agency (Macupe, 2015, p. 7).

Regarding the certification rate, the Minister of Higher Education and Training, Blade Nzimande, stated that although the certification rate was improving, it was not satisfactory (Nzimande, 2013). The 2012 certification report (Report 191) shows 39% NCV and 61% certification rates for Report 191 or NATED courses (HRDCSA, 2014, p. 11). Another certification report shows 9% in 2009 and 33% in 2013 for NCV, while Report 191 (NATED courses) Business Studies stood at 38% in 2009 and 60% in 2013 (Nzimande, 2013). The problem of the low certification rate is exacerbated by the delayed issuing of certificates to students who have passed their courses. Macube (2015, p. 7), in his recent article titled "Long wait for certificates", cites the Minister as having said that there was a total of 162 884 NCV certificates outstanding at TVET colleges in 2015. The Minister ascribes the delay to examination information technology. Students, however, give different reasons. One student stated that he was told there was a national backlog that is beyond the colleges' control. The delay inconveniences the students, as employers demand certificates before employment. While they are faced with the problem of unemployment, those students who get jobs are declined by employers who demand certificates.

Reacting to the delayed course certificates, Minister Blade Nzimande is cited as having said, "It is denting the image of the college – we cannot say we want to elevate colleges without cleaning our house" (Macupe, 2015, p.7). Nzimande further stated that they (the DHET and colleges) should not be surprised that the majority of young people resist enrolling in FET colleges and aim for universities instead (Ntlatleng, 2012).

The DHET acknowledges some of the criticisms levelled against the TVET colleges. Minister Nzimande (2013) advises the colleges to work harder to improve the quality of their offerings, as by doing so they will not only raise the prestige of the colleges, principally with employers, but also enhance their image among communities and students.

*Unclear definition of articulation – from college to university*

There is also a concern about the articulation routes to other sub-sectors, which are not well defined. In the context of FET colleges, articulation refers to the students pursuing further education in institutions of higher learning, or obtaining any kind of employment (DHET, 2012, p. 13).

The articulation of FET colleges with the rest of the post-school system is regarded as one of the key priorities for the DHET. A policy has been published by the DHET together with Higher Education South Africa in this regard (DHET, 2012; JET Education Services, 2014).

With the inception of the articulation system, the Minister of Higher Education and Training wished to have a system with no dead ends. On completion of their programmes, college students should have the ability to move to higher education. Students should be made aware that colleges are both a route to employment and a springboard to higher education at a later stage. The Minister acknowledged that the task of articulation is not an easy one, as fewer students currently move from colleges to universities as compared to other countries such as Germany and the Netherlands (Nzimande, 2013). Research conducted in South Africa by Seamus and Papier (2011) found that students registered at FET colleges view registration at these colleges as a route to higher education (see 4.1 above). In addition, the widespread exclusion from universities forces students to pursue FET college education and training as another route for admission to universities. Seamus and Papier (2011, p. 14) further state that the problematic part of college articulation is that these students "enter the FET college unaware of the disjuncture and may encounter an unexpected glass ceiling on completion of their studies".

The articulation process is made complex by the apparent gaps between the output competencies of the NCV programmes and the entry requirements for university-level courses. Furthermore, the fact that universities are at liberty to set additional requirements on top of the stated policy, leads to some universities being reluctant to register college students by setting stringent criteria for the selection of college students (FET Round Table, 2010, p. 33). The fact that some universities set stricter minimum requirements for admission of college students as compared to requirements for learners from academic schools might be an indication of mistrust of the FET college sector (Seamus & Papier, 2011).

*TVET colleges are regarded as second- and third-choice institutions*

FET colleges are viewed by some stakeholders, especially students, as second-choice institutions and not as first-choice institutions as the DHET claims them to be. In the study conducted by Seamus and Papier (2011) on the attitude of students towards FET colleges,

some students admitted that they chose to go to the colleges rather than staying at home after failing to meet the requirements of universities and due to lack of funds. Others said that they went to the colleges after failing Grade 12 (refer also to Powell & McGrath, 2014). In South Africa, it should be noted that vocational education, especially TVET colleges, has been living with a stigma since the technical college (ambag skole) era (refer 4.1).

The low regard of FET colleges by some stakeholders, especially students, is also experienced in other countries. It is reported that in the United Kingdom students grow up with the idea from society that academic education is the route to follow, as it leads to a profession, rather than to a job, as is the case with VET. Students further said that doing practical work belongs to lower-achieving students. A study conducted by Maebuta (2011) in the Solomon Islands revealed that students regarded TVET as the "second-best" and that most of the students who are still at secondary school level are more eager to access higher academic programmes than higher TVET courses. In the same study it was found that dropouts from lower and upper secondary schools mostly opted to enrol in TVET courses. Similar studies conducted in Australia showed that VET is regarded as "a road to nowhere" and that "those who cannot do (university education), do VET" (Seamus & Papier, 2011, p. 15).

## 5. Conclusion

Based on the foregoing, this study investigated the perceptions of some stakeholders of TVET colleges. The broad literature study revealed that there are both positive and negative perceptions of TVET colleges by stakeholders. Most literature sources on these perceptions are negative. The positive perceptions include TVET colleges as institutions of first choice, they are route to preferred career and have practical focus and they serve as progression route to higher education. The colleges are negatively viewed by some stakeholders because of unemployment and lack of workplace experience, low-quality curricula, low output and delayed results and certificates, an unclear post-school articulation system and a view of FET colleges as second- and third-choice institutions. In view of these findings, the researchers conclude that TVET colleges are currently the most relevant institutions as pillars of skills development. Despite stakeholders' negative perceptions, the importance of the TVET sector cannot be underestimated until such time that a new sector is implemented to replace the TVET colleges. As South Africa is experiencing high unemployment rate, mainly because of the skills shortage, there are high expectations from the wider community, which override the great strides made by these colleges in skills provision and creation of employment opportunities. The researchers are also of the view that the widespread negative perceptions of stakeholders should not be ignored as there are concerns of some stakeholders that are valid. The concerns and criticisms should be used to address the challenges and improve the state of the colleges.

## 6. Recommendations

In view of the above, the following are recommended:

*College-SETA-business collaboration*

As discussed previously (see 4.1 above), studies show that some employers claim not to understand the new NCV programmes. This might also be the reason why they cannot employ the college graduates or give them work experience. In some areas, especially rural

areas, there is a shortage of large, formal businesses and industries to offer work experience to graduates. This implies that as the enrolment increases at the colleges, the students outnumber the employers. This study therefore recommends that the SETAs collaborate with the business sector, especially small, medium and micro enterprises (SMMEs), to balance the student workplace training demand by new graduates. The collaboration must be done taking note that there are many emerging SMMEs. Some are registered, while others are not, and some are accredited, while others are not. The SMMEs should be spearheaded by the SETAs with the involvement of colleges in the affected areas. This measure, we believe, will bring some businesses on board to better understand how the colleges work, as they are then involved in the training of students. The researchers further argue that college-SETA-business collaboration will improve the perception of stakeholders of the colleges and encourage some to employ the students and accept them for workplace experience

*Building foundation knowledge of the colleges*

As indicated previously (see 4.1 above), technical colleges were regarded as institutions of those who were academically poor and were declined by universities or who dropped out of universities. TVET colleges are still living with that stigma. This is despite the revelation that some students become very successful after graduating from these colleges. The fact is that most learners only become introduced to the FET college sector when they are told by their parents that they should go to college because they had failed a grade twice or because there is no money for university education. The study therefore recommends that children be introduced to the concept of the FET college sector while still at primary level. They must be informed of the curriculum that will lead them to TVET colleges so that at a later stage it becomes their choice to follow vocational education with understanding and the relevant academic background. This may partly address the problem of poor performance at the colleges, as the students would have chosen what they want, not what is left. This will enable them to choose vocations of their interest as early as possible, rather than letting their parents choose for them as a way of addressing their education as a crisis-management issue.

The DHET, in most instances, acknowledges gaps in certain areas of TVET colleges and engages stakeholders. We think the DHET could also accept that the type of students that the colleges admit and the type of graduates they produce cannot be compared with Grade 12 learners and university graduates respectively. Most college learners, especially the NCV group, do not have a background to the subjects they study and some have a poor background of critical subjects such as Mathematics, Science and English. If there are support systems, we argue that they are perhaps not used effectively in some colleges. The support systems should not merely be documented in college policies; they should be seen working with evidence available. This may improve performance at the colleges and perhaps improve stakeholders' negative perceptions.

*Exploring related avenues (entrepreneurship) and correcting issues of certification*

It was indicated previously (see 1) that the purpose of the colleges at their inception was to respond to the skills demand of the South African economy with the aim of resulting in job creation. Students who study at colleges do so with the hope that they will get jobs immediately. If that does not happen, it results in negative criticism of the college sector. We think some stakeholders are not made aware that although the main aim is to create job

opportunities, the scope of the colleges is broader than that of the job market. Job creation in this regard is used as the only criterion to assess the success of the colleges. The study recommends that special emphasis be placed on the entrepreneurship skills for both business studies and engineering students. Although we agree that it is the responsibility of students to initiate projects using the knowledge imparted by the college, we argue that the college should offer them support. We believe there are business opportunities available, but the graduates just do not know how to access them.

The issue of delayed certificates (see 4.2 above) has been haunting the DHET for long. Almost every year either the release of results is late or the results are released without certificates. In some cases, even if the results are released on time, some subjects have pending results. This may create another problem where college learners compare themselves with other sectors of the DHET, such as universities, or even Grade 12 under the Department of Basic Education (DoBE). Grade 12 enrolment is much higher than that of colleges, but their results are released on time and the problems they encounter receive immediate attention. This may cause college students to believe that the colleges are institutions of second choice. The study therefore recommends that if there is a system they can emulate from the universities or the DoBE, let it be so.

*Reviewing or suspending the articulation system*

There is not enough data regarding the success of post-school articulation. It was indicated previously that the number of students who go to universities after completing NCV programmes is lower in South Africa when compared to other countries (see 4.2). We think that the articulation is made complex by the fact that universities have different admission requirements and are at liberty to implement their requirements, which will obviously make admission to universities very difficult for college students. This study recommends that the colleges should not place much emphasis on articulation, or that the system be reviewed or suspended while the DHET is examining its viability. Some of the college students join colleges after failing to gain admission to universities upon completion of Grade 12. They might join the colleges with the hope that articulation will favour them. Second failure may cause these students to believe the assumptions that colleges are meant for those who cannot cope at universities. Currently, some colleges are making arrangements with universities to offer university courses. The success of such arrangements is, however, unknown. While universities are at liberty to accept or not to accept college students, we argue for a review of the system to include negotiation with some universities, especially universities of technology, so that they can accommodate TVET college students with systems in place to support them to cope with the university teaching and learning environment.

In addition, the study recommends that colleges should work closely with universities and inform each other about what they offer and about outputs in particular programmes. This may avoid over-production in the same programmes and the business sector finding it difficult to absorb them. The result will be high competition between college and university products. In such a competition, opportunities may favour university graduates.

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# INTEGRATION OF ICT EDUCATION IN JUNIOR SECONDARY SCHOOLS IN NIGERIA: A CASE STUDY OF ABIA STATE

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## ABSTRACT
The purpose of this study is to investigate the integration of information technology communication (ICT) education curriculum in junior secondary schools, in Abia State in Nigeria. Quantitative method was used. The questions that are posed in this study were formulated based on the following criteria: comprehensive and adequacy of the curriculum, availability of ICT facilities, qualified and teachers'profciency for effective teaching. Participants were 45 junior secondary schools and 69 computer teacher. These participants were selected using simple random sampling. Data were collected using survey questionnaire. Data were analyzed using descriptive statistical tools. Result showed that the integration of ICT education curriculum in schools is adequate, whereas ICT laboratory and the competentency of ICT teachers are inadequate. It is recommended that Parents and Teachers' Association (PTA) as well as Non- Governmental Organizations (NGOs) assist the government in providing an enabling environment, and functional ICT laboratories for schools.

**Keywords:** Information and communication technology, junior secondary schools

## INTRODUCTION
The current trend in research all over the world is the input of computer facilities to enhance students learning. In this era, computer has caught the imaginations of educators to see how it could enhance learning and thinking (Shaki & Gevers, 2011; Panaoura, 2012). Information technology communication (ICT) is defined as the ability to use technology, communication tools, and networks appropriately to solve information problems in order to function in an information society (Policy on ICT in School Education, 2012). On the other hand, technology is described as tools, devices, content, resources and digitalized services that could be transformed into or conveyed through a digital format in order to achieve the aims teaching and learning. This includes the ability to use technology as a tool to research, organize, evaluate, and communicate information in the academic environment.

Research shows that ICT is an effective medium of instruction (Azuka, & Awogbemi, 2012; Shaki, & Gevers, 2011). According to Yusuf (2005) the potential of ICT will be to enrich, enhance, accelerate, motivate and engage scholars to create economic sustainability for tomorrow's workforces including strengthening teaching with rapid change. Adomi and Kpangban (2010) concluded that ICT or computer education have positive impact on teaching learning if integrated effectively. Aniebonam, (2008) posits that lack of computer facilities and incompetent teachers have created a very big gap in the effort to bridge digital divide in Nigerian academic empowerment. According to Yusuf (2005), greater proportions of education in the developed countries have been immersed with ICT thereby enhancing teaching, learning and research. He argued that increase in the use of ICT or computer facilities promotes efficiency as well as provide security. Ogunneye (2000) asserts that a

nation that makes its citizenry computer literate is a nation that wishes its people to be part of the global race for economic, political, industrial, and social emancipation. Also the nation that wishes to be among the producers of goods and services rather than a perpetual consumer of goods and services (Ogunneye, 2000). This author further states that this nation does not wish to be domed to obsolescence.

However, computer education, which has become valuable in our education system, is a 'Sine-qua-non' for any nation that desires to cope with the rapid, social, economic, scientific and technological changes of the third millennium. In this regard, Ogunneye (2000) concluded that the whirlwind of computer technological innovations and advances of millennium may envelop and cast into the sea of obsolesce any nation that does not embrace, with all vigor, ICT and computer education. Computer education is a culture which the nations now desire to grab because of its value to productive ends in solving problems that confronts daily man activities (Ogunneye, 2000). Since computers are products of this technological age and the Nation's 6-3-3-4 system of education is geared towards science and technology, it is mandatory that all Nigerians become computer literate. In fact, the importance of ICT and computer in the educational system and economic development in Nigeria has motivated the researcher to investigate the extent of availability of ICT facilities (computer hardware) and manpower (Computer teachers) for successful implementation and integration in the junior secondary schools curriculum in Abia State Nigeria. The objectives of this study was to implement ICT education in junior secondary schools in Abia State in Nigeria in order to create situation where citizen are ICT competent, increase ICT literate society that can deploy, operate, benefit from ICT so as to contribute to the nation's economic development and to develop teamwork, cooperation and collaboration among the society.

## LITERATURE REVIEW

The Federal Republic of Nigeria, (2004) National Policy on Education stated the effective role of ICT and computer education in the contemporary technology age that offers the Nigerian education system the opportunity to compete with other developed countries. The policy stated that the government has provided necessary facilities as well as training to support the teachers and the students (Federal Republic of Nigeria, 2004). In fact, the Federal Government of Nigeria in 1988 introduced ICT and computer education in some selected secondary and primary schools as pilot study (Adomi, 2010). As a result, the majority of secondary schools and some primary schools in urban areas began teaching computer courses in order to make pupils computer literate. Unfortunately, the Federal Government did not provide manpower and the facilities that would motivate the students as well as teachers to function adequately. It is worth to note that the basic agents of technology transformation is that teachers should be trained on the use of ICT and computers in education. Nagar and Bracha (2013) confirmed that the attention given to teachers towards ICT integration is not sufficient for effective changes to take place.

Several studies have been conducted on teacher competency on the implementation of ICT and computer in the curriculum in secondary schools (Badau & Sakiyo, 2013; Oshionebo & Ashang, 2011). The results showed teachers are not competent to meet the demands of this nature. In this regard, factors such as inadequate facilities, inadequacy of fund, and lack of trained teachers, insufficient power supply, relevant text books and inconsistency government

policies were identified (Badau & Sakiyo, 2013; Oshionebo & Ashang, 2011; Aduwa-Ogiegbaen and Iyamu, 2005). It is stated that the proper implementation of ICT in the curriculum goes beyond acquiring computer skills but it enhances 21st century skills of handling information that are needed to build new skills that foster engagement and life-long learning. (Badau & Sakiyo 2013). The other identified factors is the method of teaching. In this case, Oshionebo and Ashang (2011) revealed that teachers and principals in Nigerian schools are not encouraged to change from their traditional way of "chalk and board" methods of teaching. In this case I could be argued that several efforts have been made by educational sectors to integrate ICT in secondary schools by making sure that there is adequate provision of ICT facilities and its' utilization, but yet many schools do not offer ICT and computer education training program. It is pointed out that ICT application could be one of the effective sources of preventing Nigerian educational and economic development problems, if it is effectively intergraded to educational system (Goshit, 2006). In fact, without ICT, economic and technological development in this 21st century Nigeria will be behind with development (Aduwa-Ogiegbaen & Iyamu, 2005).

Several factors contribute to students 'poor performance in all the institutions from primary to tertiary in all subject. However, teachers as agents of technology transformation seem to have the most significant effect on students' academic achievement (Ball, Hill & Bass, 2005). As confirmed by Bracha (2013) little attention is given to teachers towards the implementation and integration of ICT and computer in Nigeria schools for effective teaching to take place. Oshionebo and Ashang (2011) asserted that teachers' competency on the utilization of ICT and computer was due to lack of motivations, and inadequate provision of ICT facilities. These factors hinder teachers to effectively functions, integrate and implement ICT in the curriculum in Nigerian schools. In addition to this, many of these teachers and principals are not willing to change from their traditional way of doing things which have negative implications on the nation's educational system. It could be argued that most of these teachers are not to be blamed for this in adequate adoption of ICT and computers in education. The reason is that they have limited skills and content knowledge of ICT and computers. This tends to suggest that teachers' competency on the utilization of ICT and computer was due to lack content knowledge. On the other hand, the lack of adequate provision of ICT facilities that could have helped teacher develop and successfully integrate the ICT philosophy into the pre-service teaching curriculum in the state is not in place.

## RESEARCH QUESTIONS

The research questions posed in this study are:

(1) Is ICT and computer education curriculum comprehensive enough to attain the required ICT and computer knowledge and skills in secondary school?
(2) Are ICT and computer laboratories well equipped for effective teaching and learning in junior secondary school?
(3) Are teachers competent to handle the ICT and computer education facilities for effective teaching and learning?

## METHODOLOGY

The quantitative method was used in this study. Survey questionnaire was used to collect data about the integration of ICT and computers in some schools in Abia State, Nigeria. The population of the study consisted of 69 ICT teachers in 108 Junior Secondary Schools

offering computer education in Abia State. This data was obtained from examination Development Centre (EDC) Umuahia. The study was carried out in the 3 Educational Zones of Abia State which comprises Aba, Ohafia and Umuahia Zonal Education Boards in Abia South, Abia North and Abia Central senatorial zones respectively (see table 1). Simple random sampling was used to select 45 junior secondary schools with their ICT and computer teachers. All the 69 ICT teachers of JSS1-JSS3 were involved in the study. Table 1 shows the profiles of schools selected for the study and the number of teachers that participated from the selected schools.

**Table 1.** School profile of ICT and computer teachers

| Education zone | No of selected schools | No of ICT teachers |
|---|---|---|
| Aba | 20 | 30 |
| Ohafia | 12 | 17 |
| Umuahia | 13 | 22 |
| Total | 45 | 69 |

## INSTRUMENTS AND DATA COLLECTION PROCEDURE

Data were collected using a four-point Likert rating scale of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD) which consists of 10-item questionnaire adopted by the researcher. The instrument had been administered to ICT teachers in five junior secondary schools in Okigwe local government of Imo State which were not part of the study population. The same instrument was re-administered to the ICT teachers after two weeks interval of administering. The data collected were correlated using Pearson Product Moment Correlation Coefficient statistics. And the reliability of the instrument was 0.81. Based on this value, the instrument was considered appropriate. Data was analyzed using descriptive statistical tools.

## RESULT

Table 2 shows the teachers' responses of the four items relating to teachers' comprehensiveness of the ICT curriculum to teach the students. For the purpose of this analysis, the affirmatives 'strongly agree' and 'Agree' 'were collapsed to 'Agree' while the non-affirmatives 'strongly disagree' and 'Disagree' were collapsed to 'Disagree' as often used in educational research studies (e.g. Mogane & Atagana, 2010).

**Table 2:** Data response on curriculum comprehensiveness

| Likert Scale | Frequency F | Cum. Freq. FX | % |
|---|---|---|---|
| SA | 38 | 152 | 66 |
| A | 19 | 57 | 25 |
| D | 8 | 16 | 7 |
| SD | 4 | 4 | 2 |
| Total | 69 | 229 | 100 |

From the Table 2, out of the 69 teachers, 38 teachers strongly agreed, and 19 agreed that curriculum is comprehensive enough for the attainment of the ICT required skill and knowledge. Only 4 of the teachers strongly disagreed, and 8 disagreed that that curriculum is comprehensive enough for the attainment of the ICT required skill and knowledge. Further

confirmation from theoretical and practical mean calculated revealed that the junior secondary school curriculum is comprehensive enough for the attainment of the ICT required skill and knowledge.

Theoretical mean =2.5

$$\bar{x} = \frac{\sum fx}{\sum f}$$

Practical mean =229/69 = 3.32

From the responses, practical mean is greater than theoretical mean score. This result shows that the junior secondary school curriculum is comprehensive enough for the attainment of the ICT required skill and knowledge.Table 3 addressed research question 2 that sought to find out if computer laboratories are well equipped for effective teaching of junior secondary school. Results show that 35 out of the 69 teachers strongly disagreed, and 31 disagreed that ICT and computer laboratories are well equipped for effective teaching and learning of computer education ans integration in the curriculum in the junior secondary schools in Abia State. Whereas, only 2 of the teachers strongly agreed, and 1 agreed that ICT and computer laboratories are well equipped for effective teaching and learning of computer education in junior secondary schools in Abia State.

**Table 3:** Level of equipped laboratories by teachers

| Likert Scale | Frequency F | Cum. Freq. FX | % |
|---|---|---|---|
| SA | 2 | 8 | 7 |
| A | 1 | 3 | 3 |
| NA | 31 | 62 | 57 |
| SNA | 35 | 35 | 32 |
| Total | 69 | 108 | 99 |

This is further confirmed from theoretical and practical mean calculated that the ICT and computer laboratories are not well equipped for effective teaching and learning of computer education in junior secondary schools in Abia State.

Theoretical mean =2.5

$$\bar{x} = \frac{\sum fx}{\sum f}$$

Practical mean =1.6

Theoretical mean is greater than practical mean; this shows that there is inadequate and well equipped ICT and computer laboratories for effective teaching and learning of computer education in junior secondary schools in Abia State.

Research question 3 was addressed in Table 4. The research question sought to find if teachers' competency affect the utilization of ICT and computer education facilities for effective teaching and learning.

**Table 4:** Teachers' response on the ICT proficiency

| **Likert Scale** | Frequency F | Cum. Freq. F) | % |
|---|---|---|---|

| | | | |
|---|---|---|---|
| SP | 3 | 12 | 10 |
| P | 2 | 6 | 5 |
| NP | 33 | 66 | 57 |
| SNP | 31 | 31 | 27 |
| Total | 69 | 115 | 99 |

Out of the 69 respondents, 31 out of the teachers strongly disagreed, and 33 disagreed that teachers are proficient in the utilization of ICT facilities for effective teaching of computer education; whereas, 3 of the teachers strongly agreed, and 2 agreed teachers are proficient in the utilization of ICT facilities for effective teaching of computer education. To confirm further, theoretical and practical mean calculated showed that teachers are not proficient in the utilization of ICT facilities for effective teaching of computer education.

Theoretical mean = 2.5

$$\bar{x} = \frac{\sum fx}{\sum f}$$

Practical mean =1.6

The result shows that the theoretical mean is greater than the practical mean; this implies that teachers are not proficient in the utilization of ICT facilities for effective teaching of computer education.

**DISCUSSION**

Results obtained from this study showed that the full implementation of computer education program has not taken full shape in the junior secondary schools in Abia State. This, notwithstanding, the curriculum is comprehensive enough to acquire ICT skills. National computer education curriculum with its objectives is very comprehensive but the factors which involves provision of funds, computer facilities, power supply, text books, training and proficient teachers are still a challenge. Lack of computer facilities and incompetent teachers have created a very big gap in the effort to bridge digital divide in Nigerian academic empowerment (Aniebonam, 2008). If the curriculum is not comprehensive and the facilities were not grounded for effective take-off, there is no way the educational system in Nigeria could compete with the developed nations academically, and economically. Oshionebo and Ashang (2011) argued that the ICT integration curriculum of secondary school teacher and principals in Nigeria is not encouraged. More efforts should geared towards the integration of ICT in the secondary schools by providing adequate ICT facilities as well as teacher training.

The brilliant ideas contained in the National Policy of education appeared to have suffered tremendously during the implementation stage and this should be re- enacted. Adequate training should be given to students to attain their desired goals for sustainable development and human capacity building.

**CONCLUSION**

In conclusion, the integration of ICT and computers in Nigerian educational system as specified in the curriculum could make provision for students to be proficient in the use of ICT skills by the time they finish secondary education. Nigerian government should effectively integrate implement ICT education with the current curriculum in the educational system with the provision of functional and effective ICT infrastructures, competent staff or

teacher, and efficient power supply and retraining of the teachers. If the teachers are not properly trained in the new curriculum, students will suffer. The Nigerian educational system should completely implement and integrate ICT education in schools across the nation.

## RECOMMENDATION

It is recommended that the government and private sector provide schools with adequate and sufficient computer hardware and software. It is crucial that the government ensure that the integration and implementation of ICT and computer education is mandatory in all secondary institutions. There should a robust computer training and re-training programs for teachers. It also recommended that the supervisory agency (Federal and State Ministry of Education) should be more proactive in their planning.

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# FACILITATING CONCEPTUAL CHANGE IN STUDENTS' COMPREHENSION OF ELECTROCHEMISTRY CONCEPTS THROUGH COLLABORATIVE TEACHING STRATEGY COMBINED WITH CONCEPTUAL CHANGE TEXTS

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**Abstract**
This paper reports on a study to determine the effectiveness of collaborative teaching strategy combined with conceptual change texts on physical sciences students' comprehension of electrochemistry in the Ximhungwe circuit of the Bohlabela district in the Mpumalanga province of South Africa. The design of the teaching strategy draws upon theoretical insights into perspectives of social constructivism and empirical studies to improve upon the teaching of the main topic, specifically galvanic cells, electrolytic cells and electrode potentials. In addition, the effect of collaboration as a teaching strategy on students' perception of their chemistry classroom environment was also investigated. A sample of 90 grade 12 physical sciences students from four intact public schools was conveniently selected to participate in the study. Students were given electrochemistry concept test (ECT) as well as chemistry classroom environment questionnaire (CCEQ) as pre-test and post-test. One-way analysis of covariance (ANCOVA) conducted showed that students taught using collaboration had significantly better acquisition of scientific conceptions related to electrochemistry than students taught using lecture method. Pearson Product-Moment Correlation also revealed that there was a significant positive relationship between achievement and students' perception of their chemistry classroom environment. However, ANCOVA and ANOVA results indicated that there was no significant contribution of students' perception of their chemistry classroom environment to their comprehension of electrochemistry concepts. This study provides statistical evidence on the importance of meaningful learning combined with social process to improve students' understanding of electrochemistry.

**Keywords:** collaboration, conceptual change texts, electrochemistry, social constructivism

## 1.1 Introduction

Current researches on intentional conceptual change emphasize the role of students' metacognitive strategies, epistemic beliefs and agency in knowledge restructuring (Sinatra & Pintrich, 2003). It also points to the need of designing learning environments that encourage students to employ goal-directed, reflective strategies and to develop meta-conceptual awareness. The importance of history and philosophy of science and epistemological issues on conceptual change in science education has been a subject of considerable interest in literature (Cho, Lankford & Wescott, 2011; Lederman, Lederman & Antink, 2013). Researchers have argued that conceptual change involves not only changes in concepts; but that there needs to be changes in students' epistemic cognition and views about the nature of science (Lederman, Lederman & Antink, 2013). Cognitive research has shown that students' epistemic beliefs can constrain or facilitate their thinking, reasoning and science learning. Stathopoulou & Vosniadou (2007) found that students' epistemological beliefs about chemistry were a strong predictor of their level of understanding of chemistry, and that common students' epistemological beliefs are related to conceptual understanding about science. Conley, Pintrich, Vekiri & Harrison (2004) also indicated that students became more sophisticated in their beliefs about source and certainty

of knowledge. Similarly, Cho, Lankford & Wescott (2011) explained that students` epistemological beliefs significantly correlate with their conceptual change but their beliefs about nature of science did not.

Conceptual change involves meta-conceptual awareness where students will be able to learn science concepts and principles only if they are aware of their prior comprehension and the shift of their initial views toward scientific explanations, (Vosniadou, 2008). Therefore, it is necessary to design learning environments that enable students to become aware of their existing internal explanatory frameworks and beliefs (Lederman, Lederman & Antink, 2013). Understandably, socio-cognitive discourse plays a key role in facilitating conceptual change as well as enhancing problem solving skills (Chan, Lam & Leung, 2012; Heng, Surif & Seng, 2014).

Research has also indicated that conceptual change text oriented instruction has a significant importance as a teaching strategy to identify the misconceptions in science concepts and to improve student learning. Conceptual change texts are also the conceptual change strategies which are used to prevent students' misconceptions in order to improve students' achievement (Cetin, Ertepinar and Geban, 2015; Karslı and Çalık 2012; Taşlıdere, 2013).

Several studies have reported misconceptions about electrochemistry and indicated that electrochemistry is one of the most difficult topics in chemistry because it contains many ambiguous and abstract terms and has an apparent lack of consistency and logic in its representation (Ahmad and Che Lah, 2012; Al-Balushi, Ambusaidi, Al-Shuaili and Taylor, 2012; Karsli and Ayas, 2013; Karslı and Çalık 2012). These studies indicate that most of the students lack conceptual knowledge because assessments in electrochemistry are mainly on algorithmic problems. A number of studies proposed strategies to facilitate conceptual change in students' understanding of electrochemistry (O'grady-Morris, 2008). Ochonogor (2011) conducted a research in two underperformed South African high schools using active learning model and a special form of cooperative learning strategy nick-named "goat and sheep method" with extra activities including animation to teach the experimental class. It was found out that upward of 87% of learners in the intervention class showed remarkably improved pass rate in quantity and quality in the post-test. He concluded that topics taught using this method became more learner-friendly to the learners while the educator also achieves higher confidence and proficiency in dealing with the subject with little efforts.

Some of the researchers also report that their techniques sometimes fail to completely overcome students' alternative conceptions on the various topics in science in general and electrochemistry in particular (Ahmad & Che Lah, 2012). Accordingly, Karslı & Çalık (2012) indicated that using just one teaching method to accomplish conceptual change may in fact result in some disadvantages. Students soon become bored with continued reading of conceptual change texts or using only one method as it becomes too monotonous (Orgill & Bodner, 2004). It is against this backdrop that this study used the collaborative learning approach combined with conceptual change texts to facilitate students understanding of electrochemistry. Novak (2002) stated that group learning facilitates meaningful learning and new knowledge construction.

### 1.2 Theoretical Framework

Conceptual change theory describes learning as a situation of comprehending and accepting ideas because they are seen as intelligible and rational (Posner et al. 1982). Conceptual change refers to the idea that students acquire as new learning experience with a host of prior experiences and beliefs for which they have constructed explanations that work for them. The conceptual constructs shown or developed by students in the classroom may be naïve, premature, or actually incorrect in relation to accepted science (Duit, 2003). This implies that teaching for conceptual change would mean engaging students in developing new comprehension of science phenomena (Dykstra, 2005). This involves helping students to correct their miscomprehensions, facilitate the reorganization of their naïve concepts into useable, integrated comprehensions and develop intellectual tools useful to them in a variety of contexts (Suping, 2003). Posner et al (1982) contend that conceptual change will only occur if a learner encounters an event for which his or her existing comprehension provides an unsatisfactory or incomplete explanation. Discrepancies inevitably results as members of a collaborating group express their differing renditions of the problem they are confronted with. This discrepancy may provide the kind of dis-equilibrating event that provokes the dissatisfaction described by Posner et al (1982). What follows among the group members is a negotiation of these discrepancies. In fact, many studies have shown the importance of students` joint discourse has on achievement (Kittleson & Southerland, 2004).

### 1.3 Statement of the Problem

The problem that formed the focus of this study is that high school students in South Africa have been performing poorly in physical sciences in general and in topics in electrochemistry in particular, since 2009, when the National Senior Certificate (NSC) examination was introduced (DEMP, 2015). Communication in science classrooms is in the form of teacher-talk with reproductive comprehension by the students (Driver, Newton, & Osborne, 2000). Essentially, teachers talk and students listen, and lengthy, on-subject discourse in classrooms is a rare event. To supplement these efforts, the Department of Education of Mpumalanga Province (DEMP) is continuously putting in place programmes to facilitate and improve student performance in the NSC examinations. Despite all these efforts, majority of grade 12 students still perform poorly, especially in the Bohlabela district of the Mpumalanga Province in the final NSC examinations. Results in physical sciences, paper 2 (chemistry) and electrochemistry continue to decline since 2010 (DEMP, 2015) excepting 2012. It is against this backdrop that this study was carried out to to determine the effectiveness of collaborative teaching strategy combined with conceptual change texts on physical sciences students' comprehension of electrochemistry in the Ximhungwe circuit of the Bohlabela district in the Mpumalanga province of South Africa.

### 1.4 Purpose of the Study

Based on the problems highlighted, the study designed a conceptual change teaching strategy (CCTS) specifically collaborative learning combined with conceptual change texts (CCTs) to enhance students' comprehension of electrochemistry. It was also to investigate the conceptual changes in science conceptual comprehension that take place when students have the opportunity to collaborate on solutions to extended science problems assigned by the classroom teacher. The study focused on the outcome of students' discourse during collaboration because it is the way students make their conceptual comprehension apparent. This study analyzed the collaborative discourse with CCTs as a teaching strategy in order to understand the group dynamics and their effects on conceptual comprehension. It was all

aimed at possibly enhancing students' comprehension and improving their performance in Physical Science.

### 1.5 Null Hypotheses

Three null hypotheses (Ho) were formulated for the study as follows:

1. $Ho_1$: there is no statistically significant mean difference in post-test mean scores between students taught electrochemistry concepts with conceptual change teaching strategy and those taught with lecture teaching method.

2. $Ho_2$: there is no statistically significant difference in post-test mean scores of students` perception of chemistry classroom environment between students taught electrochemistry concepts with lecture method and those taught with conceptual change teaching strategy.

3. $Ho_3$: there is no statistically significant relationship between physical sciences students' post-test mean scores on their perception of their chemistry classroom environment and their achievement in electrochemistry concepts.

## 2. METHODOLOGY

### 2.1 Research Design

The study used a quasi-experimental non-equivalent pre-test-post-test group control research design. This was because it was not possible to randomly assign students to a particular class section but in their intact classes (Gliner, Morgan & Leech, 2011).

Of the four schools selected for the research, two schools represented the control group and the other 2 schools represented the experimental group. One teacher taught the experimental group and the other taught the control group for four weeks. Each group had two Chemistry periods of three hours duration each per week after normal school hours. The main materials in this study were conceptual change texts (CCTs), prepared by the researchers based on students misconceptions in electrochemistry retrieved from literature. The materials were checked by two experienced chemistry teachers and a chief marker of chemistry (physical sciences paper 2).

ECT was administered as pre-test was administered on the participants in the week before the treatment instruction began. The same pretest and the post-test instruments, CCEQ and ECT were administered to both control and experimental groups accordingly.

### 2.2 Development and Validation of the Instrument

#### 2.2.1 Electrochemistry Concept Test (ECT)

This test was developed by the researchers to measure the students' comprehension of electrochemistry concepts, specifically electrolytic cells, galvanic cells and electrode potentials. Misconceptions as reported by O'grady-Morris (2008) were examined in conjunction with the requirements of the South African Curriculum and Assessment Policy Statement (CAPS) to generate the ECT instrument of this study. The internal consistency coefficient or reliability of the test was calculated using Cronbach alpha and was found to be 0.82.

#### 2.2.2 Chemistry Classroom Environment Questionnaire

In constructing the Chemistry Classroom Environment Questionnaire CCEQ, "What Is Happening In This Class?" (WIHIC) instrument developed by Fraser, McRobbie & Fisher (1996) to measure high school students' perception of their science classroom environment served as a guide in agreement with Aldridge & Fraser, 2000. The five sub-scale instrument was assessed for face and content validity by two researchers at the University of South Africa and two teachers in the schools where the instruments were pilot-tested.

**Table 1: Selected WIHIC sub-scales for CCEQ and their Descriptions**

| Scale | Description | Item |
|---|---|---|
| Student Cohesiveness [SC] | Extent to which students know, help and are supportive of one another. | I make friendship among students in this class |
| Teacher Support [TS] | Extent to which teacher helps, be friends, trust and show interest in students. | The teacher takes a personal interest in me. |
| Involvement [IV] | Extent to which students have attentive interest, participate in discussions, perform additional work and enjoy the class. | I discuss ideas in class. |
| Cooperation [CO] | Extent to which students cooperate rather than compete with one another on learning tasks. | I cooperate with other students when doing assignment work. |
| Equity [EQ] | Extent to which the teacher treats students equally. | The teacher gives as much attention to my questions as to other students' questions. |

The inter item correlation coefficient between the items using the Cronbach alpha coefficient analyses to be 0.73, which showed that they were highly consistent and a good measure of a particular sub-scale.

### 2.3 Method of Data Collection

The experimental group was taught using collaboration combined with CCTs and the former with the traditional method that the classroom teacher is familiar with. The ECT and CCEQ were administered as pre-test in the fourth week of July 2015, before instruction began in the fifth week of July 2015. The post-test was administered after treatment, precisely in the fourth week of August 2015. The ECT involved a pencil and paper test on electrochemistry concepts for the post-test. Two physical sciences teachers were trained by the researcher for the study. According to the syllabus for grade 12 physical sciences, teachers should use 8 hours to teach electrochemistry in two weeks, four hours per week and one hour per class period. Instead, the teachers used three hours per week, one and half hours per class period for the four weeks of treatment. The experimental group was taught by the teacher trained in the use of the study intervention strategy and the control group by the other teacher with lecture method. These teachers have been teaching physical sciences for 7 years and were the

best teachers in physical sciences for 2011, 2012 and 2013 academic years in the Ximhungwe circuit and Agincourt circuit respectively as judged by the Department of Education.

The texts were developed by the researchers for the collaborative group. The conceptual change texts were developed according to the Conceptual Change Approach introduced by Posner et al. (1982). The conceptual change texts used in this study had been proven for their effectiveness (Ozkan & Sezgin Selcuk, 2013) and complimented with collaboration strategy to enhance learner participation and comprehension.

The teacher in the collaborative learning class started the teaching-learning process by handing out worksheets to each group member as the first step of the conceptual change texts. The students were told to follow the instructions carefully. The teacher directed the students to study in groups of five with one volunteer student reading the texts within a specified time frame and provide their answers as requested. Each group member was allowed sometime to independently solve the problem and then students discussed the subject matter in their groups, giving them the opportunity to correct their members' mistakes and come up with a pooled answer with the teacher as facilitator (Vygotsky, 1978). The following is a sample conceptual change text on electrolytic cell.

*Use the following information to answer the next three questions.*
Use the following information to answer the next two questions.
A student set up the following electrochemical cell and allowed it to operate for a few minutes.

1.1 Write down the oxidation and reduction half-reactions and predict the overall reaction.
1.2 Identify the anode and cathode and explain how they were obtained.
1.3 What is the role of the inert electrodes?

**Figure 1:** First part of the text

During the implementation, a discussion environment is supplied in the classroom within each group to enable students grasp the problem situation better.
The second part features common misconceptions and answers that are scientifically wrong.

1-1 The most frequent answer about this is "When predicting electrolytic cell reaction the oxidation and reduction half-equations from the standard reduction potential table are

reversed prior to combining them" misconception. What about you? What do you think? Now, read the next text very carefully.

1-2 The most frequent answer about this is "In an electrolytic cell the polarity of the terminals of the applied voltage has no effect on the site of the anode and cathode." misconception. What about you? What do you think? Now, read the next text very carefully.

1-3 The most frequent answer about this is "Inert electrodes can be oxidized or reduced" misconception. What about you? What do you think? Now, read the next text very carefully.

**Figure 2:** Second part of the text

After the students have given the problem a second thought, the scientific conceptions concerning the subject are explained by the teacher. That explanation must be very clear and intelligible. In this section, arrangement should be made as taking into consideration Posner et al.'s intelligibility and plausibility principle. Supporting collaboration with conceptual change texts gives direction to group members and reduces boredom and monotony and improves learner comprehension and achievement.

***Let's see if your answer is correct***

- In an electrolytic cell

  Electrical energy is used from an external power source to produce a chemical change. The reactants will not react if mixed but the products will react if mixed. A potential applied across the electrodes forces an oxidation-reduction reaction to occur at the electrodes. The applied potential must be greater than the predicted cell potential and in the opposite direction.

- Electrodes

Electrodes are electrical conductors, which are placed in an electrolyte to provide surfaces for oxidation and reduction half-reactions. The nature of the electrodes and the electrolyte determined the oxidation and reduction reaction that occur. Inert electrodes, such as graphite and platinum, are made from substances which conduct electricity and are not chemically altered in cell reactions. The anode and the cathode are determined by the connection of the terminals of the external power source and the subsequent direction of electron flow. The electrode connected to the positive terminal of the power source becomes the anode and the electrode connected to the negative terminal becomes the cathode. The anode is the electrode at which oxidation occurs while the cathode is the electrode at which reduction occurs. The anode is labelled (+) and the cathode is labelled (-).

- Transfer of charge

In the external circuit, electrons travel from the negative terminal of the power source to the cathode and from the anode to the positive terminal of the power source n the internal circuit, the movement of ions maintains electrical neutrality and completes the circuit. An electrolyte conducts electricity within a cell by the movement of dissolved positively and negatively charged ions. The movement of ions completes the circuit and maintains electrical neutrality. Negative ions are called anions and positive ions are called cations. Anions move through the electrolyte to the anode and cations move to the cathode.

- Electrolytic cell reactions and standard reduction potential tables

The half-reaction at the cathode results from the reduction of cations (in molten or aqueous Solution), or the reduction of water (in solution) to form hydrogen gas and hydroxide ions.

The half-reaction at the anode results from the oxidation of the metal electrode of anions (in molten or aqueous solution) or water (in solution) to form oxygen gas and hydrogen ions. The cell reaction may be predicted from the tables of reduction potential by combining anode and cathode half-reactions. The cell reaction requiring the lowest potential occurs first. The cell potential predicted from tables of standard reduction potentials is negative and indicates that the reactions will occur with an applied power source. For a reaction to take place, the applied potentials must be greater than the predicted negative cell potential. The concentration of reactants, nature of electrodes and electrolyte and other factors determine which cell reactions occur. (Other factors include temperature, pressure, and over potential effects).

**Figure 3:** Third part of the text

In the fourth part, when students perceive the difference between misconceptions and scientifically true explanations, they are asked to express their own opinions. The aim in this part is to measure how much awareness has been raised among students and see if they still have some question marks in their minds or not.

Did you change your mind after reading the text? If you did, please express your views once again by considering the text, and give an example.

**Figure 4:** Forth part of the text

The purpose of the last part was to understand whether or not the students have properly grasped the text. In this section, Posner et al's fruitfulness principles were applied to a new problem situation to see if learners can transfer and apply the acquired knowledge to a new problem situation.

***Now, let's answer the following questions:***

Use the following information to answer the next two questions.

1. The diagram below represents a cell that can be used to electroplate a tin medal with a thin layer of silver to improve its appearance.

1-1 When the key is closed the plating of the medal will take place at the *i* where *ii* occurs. The statement above is completed by the information in row

| Row | *i* | *ii* |
|---|---|---|
| A. | Anode | Oxidation |
| B. | Anode | Reduction |
| C. | Cathode | Oxidation |

| | | |
|---|---|---|
| D. | Cathode | Reduction |

1-2 The anode in the electrochemical cell above is

A. Identified by its location in the cell
B. The species with the highest reduction potential
C. The metal with the least ability to attract electrons
D. The electrode with the highest concentration of electrons

Use the following information to answer the next question.

1. Copper can be refined (purified) using an apparatus like the one shown below, which is a small-scale version of an industrial apparatus.

1-1. If direct current power supply produces a steady 3.50 A current, then the time required to deposit 0.100g of purified copper is _____s.

1.2 The reason for your answer in the question above is

_____

_____

**Figure 5:** Fifth part of the Text.

## 3.0 RESULTS, FINDINGS AND DISCUSSIONS

1. $Ho_1$: there is no statistically significant mean difference in post-test mean scores between students taught electrochemistry concepts with conceptual change teaching strategy and those taught with lecture teaching method. The results of ANCOVA analysis are presented below in Table 3.

**Table 3**: **ANCOVA Summary on Comprehension for CG and EG**

a. R Squared = .333 (Adjusted R Squared = .317)

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 2335.609 | 2 | 1167.805 | 21.677 | .000 | .333 |
| Intercept | 2166.197 | 1 | 2166.197 | 40.210 | .000 | .316 |
| Pre-test | 1477.261 | 1 | 1477.261 | 27.422 | .000 | .240 |
| Teaching method | 1523.193 | 1 | 1523.193 | 28.274 | .000 | .245 |
| Error | 4686.891 | 87 | 53.872 | | | |
| Total | 204425.000 | 90 | | | | |
| Corrected Total | 7022.500 | 89 | | | | |

After adjustment for pre-test scores, there was a statistically significant difference in post-test scores between the interventions, $P$ (1.87) = 28.274, $p < .0005$, partial $\eta^2 = .245$. From Table 3 the relationship between instruction method and comprehension of electrochemistry concepts was found to be positive. Instruction method accounted for 24.5% of the variance of the dependent variable when the pre-test is controlled as a covariate. Table 4 shows that when post hoc analysis was performed with a Bonferroni adjustment, the experimental group had the highest post-test scores, statistically significantly higher than the post-test scores of the control group ($p < .0005$).

**Table 4: Pairwise comparison between experimental and control groups**

| Teaching method | | Mean Difference | Std Error | Sig. |
|---|---|---|---|---|
| Control | Experimental | -8.592 | 1.616 | .0005 |
| Experimental | Control | 8.592 | 1.616 | .0005 |

The ANCOVA results presented in the previous section showed that there was a statistically significant difference between the post-test mean scores of students taught with the traditional teaching method and those taught with the conceptual change teaching strategy with respect to comprehension of electrochemistry concepts. Table 5 presents the post-test means and standard deviations of the control and experimental groups.

**Table 5: Mean and Standard deviation for CG and EG**

| Teaching Method | Mean | Standard deviation | N |
|---|---|---|---|
| Control | 43.60 | 7.426 | 43 |
| Experimental | 49.79 | 9.146 | 47 |
| Total | 46.83 | 8.883 | 90 |

The results from table 5 indicate a post-test ECT mean score of 49.79 for the experimental group as higher than post-test ECT mean score of 43.60 for the control group.

$Ho_2$: there is no statistically significant difference in post-test mean scores of students` perception of chemistry classroom environment between students taught electrochemistry concepts with lecture method and those taught with conceptual change teaching strategy. The results are presented in Tables 6 and 7 showing the means, standard deviation; and one-way MANOVA report.

**Table 6: Mean (M) and Standard Deviation (SD) Responses for EG and CG on Chemistry Classroom Environment (CCE) Sub-scales**

| CCE Sub-Scale | Variability | | | |
|---|---|---|---|---|
| | Experimental | | Control | |
| | Mean | SD | Mean | SD |
| Student Cohesiveness [SC] | 3.78 | 0.57 | 4.32 | 0.41 |
| Teacher Support [TS] | 3.49 | 0.94 | 4.40 | 0.71 |
| Involvement [IV] | 3.47 | 0.70 | 4.06 | 0.58 |
| Cooperation [CO] | 3.63 | 0.68 | 4.35 | 0.97 |
| Equity [EQ] | 3.79 | 0.88 | 4.28 | 0.66 |

| | | | | |
|---|---|---|---|---|
| Total | 3.63 | 0.75 | 4.28 | 0.67 |

*N=43 Control; N=47 Experimental*

The results in Table 6 showed that students taught with the conceptual change teaching strategy had a higher perception of their chemistry classroom environment than those taught by the traditional teaching method

For further analysis, one-way MANOVA was used to determine if there were statistically significant differences between the two groups of students in terms of their perceptions of their chemistry classroom environments. The MANOVA test presented in Table 7 showed that the Wilks' lambda (λ) value of 0.66 was statistically significant, $F(5, 85) = 10.42$; $p < .05$; partial eta squared = .345.

**Table 7: One-way MANOVA on CCE scales and type of school**

| Effect | Value | F | Hypothesis (df) | Error (df) | p-values |
|---|---|---|---|---|---|
| Variability | 0.66 | 10.42 | 5.00 | 85.00 | 0.0005 |

Significant p<.05

This suggests that the population mean scores on the five sub-scales of chemistry classroom environment are not the same for the EG and CG and hence the hypothesis was therefore rejected. This means that there is a statistically significant difference between the perceptions of physical sciences students in the experimental and control groups across the five sub-scales of their chemistry classroom environment. As a follow-up test to the MANOVA, a one-way ANOVA with teaching method as the independent variable was conducted for each of the five sub-scales of the chemistry classroom environment as shown in Table 8.

**Table 8: Results of ANOVA as a follow up to the one–way MANOVA on the five sub-scales of chemistry classroom environment**

| CCE Sub-Scales | df | Mean Squared | F | p-values | Partial Eta Squared |
|---|---|---|---|---|---|
| Student Cohesiveness | 1 | 488.6 | 30.5 | 0.0005* | 0.228 |
| Teacher support | 1 | 1391.1 | 30.5 | 0.0005* | 0.229 |
| Involvement | 1 | 578.3 | 21.8 | 0.0005* | 0.175 |
| Cooperation | 1 | 866.3 | 19.8 | 0.0005* | 0.161 |
| Equity | 1 | 413.9 | 10.5 | 0.002* | 0.093 |

**Bonferroni Adjusted significant at P<.05.*

As shown in Table 7, all sub-scales of the chemistry classroom environment were statistically significant using a Bonferroni adjusted alpha level of 0.05. The partial eta squared values recorded for the five sub-scales indicate that all five sub-scales account for the variances in physical sciences students' perceptions of their chemistry classroom environment in CG and EG. However, it is the ANOVA which has shown where the significant differences in the post-test means exist in the sub-scales.

$Ho_3$: there is no statistically significant relationship between physical sciences students' post-test mean scores on their perception of their chemistry classroom environment and their achievement in electrochemistry concepts. The results of the analysis are presented in Table 9.

**Table 9: Correlation between CCEQ and ECT Scores of EG Students**

| Variable | N | Correlation Coefficient | p-values |
|---|---|---|---|
| CCEQ | 90 | 0.556 | 0.04 |
| ECT | 90 | | |

Pearson Product-Moment Correlation was used to check correlation between CCEQ and ECT post-test mean scores. The results revealed that there was a statistically significant strong and high relationship between achievement and students` perceptions of their chemistry classroom environment ($p < 0.05$). As shown in Table 9 the higher the students' perceptions of their chemistry classroom, the higher was the performance of students on the ECT.

### 3.3 Conclusions

Conceptual change teaching strategy provided better understanding of electrochemistry concepts for experimental group as compared with the control group. There was a statistically significant difference in the post-test mean scores between experimental groups. Post-test mean scores for experimental group as well as their corresponding mean gain scores were higher than those of the control group. There results of the study showed the need of the using collaboration combined with conceptual change texts which contributed to making differences in the achievements of experimental group.

The findings of this study have provided some empirical evidence that many students do have conceptual difficulties in electrochemistry learning area. Yet, the results do not support any assumption that usual classroom teaching of simple lecture method has provided needed support for students to generate detailed, factual explanations about the chemical phenomena. Also, the findings suggest that the typical classroom teaching and learning strategy characterized by lecture or talk and chalk or telling method of teaching is incongruous for improving students' conceptual understanding. Drawing from this, the effectiveness of the collaboration combined with conceptual change texts has been determined to a great extent with students in the experimental group having acquired higher level of conceptual understanding in comparison to the controlled group of the study.

### 3.4 Recommendations

The designed teaching strategy of this study has a the potential to be used as a tool in the South African classroom in order to improve students' conceptual understanding of electrochemistry concepts for higher achievement as is shown in the report. It is therefore recommended that the Chemistry and Physical Science teachers should endeavour to determine necessary concepts in the chemistry syllabus and apply relevant instructional strategies such as collaboration combined with conceptual change text for improved achievement of students. This approach will further improve the efficiency and effectiveness of the teachers.

### 3.5 Acknowledgement

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# THE EFFECTIVENESS OF COMPUTER ASSISTED INSTRUCTION ON STUDENTS' ACHIEVEMENT IN SOLID GEOMETRY IN OGUN STATE, NIGERIA

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## Abstract
The study investigated the effectiveness of computer assisted instruction on students' achievement in solid geometry on second year senior secondary school students in Ogun Nigeria. Three hundred and sixty students were randomly selected from the four schools purposively chosen for the study. The researchers adopted quantitative research method using the blueprint of pre-test, post-test non-equivalent control group, quasi-experimental design involving two groups: experimental, and the control groups for the study. Data collected from the pre-test and post-test were analyzed using descriptive and inferential statistics while the null hypotheses were tested using ANCOVA at 0.05 confidence level of significance. The results of the study revealed a statistical significant difference between students' academic achievement and the mode of instruction but no significant gender difference existed in students' academic achievements. Therefore, it is recommended that computer assisted instruction method should be used in the teaching and learning of solid geometric topics such as latitude and longitude in Nigeria secondary schools to improve students' academic performance in mathematics.

**Key terms:** Computer-Assisted Instruction, latitude and longitude; solid geometry, students' achievement, mathematics, secondary school

## Introduction
The problem of students' poor performance in mathematics at both internal and external examinations has remained a source of concern to all stakeholders in education including mathematics educators, and those in the field of the mathematical sciences. Consequently, the problem has eaten deep into the foundation of the nation's technological growth and its national development. Researchers such as Abakpa and Iji (2011) as well as Akinsola and Igwe (2011) have reported that topics such as construction, geometrical proofs, locus, latitude and longitude, are capable of equipping students with the mathematical knowledge and skills required for engineering courses in tertiary institutions. They stress that students equipped with this mathematical knowledge and these skills will be active players in technology and vocational areas that are the foundation of the economic development and transformation of any country.

Conscious of these facts, the federal government of Nigeria stipulates in the National Policy on Education (NPE) that for a student to be admitted to any institution of higher learning in Nigeria, such candidate should obtain credit pass in mathematics and English language (FRN, 2004). In addition, the policy stipulates that admission to Nigerian tertiary institutions shall be in the ratio 60:40 in favour of the sciences for university candidates, while polytechnics and colleges of education/technology shall be in the ratio 70:30 in favour of the sciences and technical/vocational courses, in order to encourage more students to register for science-related subjects. However, this projection as planned by the government is difficult to achieve

because many prospective science students fail to obtain credit in mathematics, and as a result cannot gain admission to the institution of higher learning of their choice.

Table 1 shows that Nigerian students' abysmally poor performance in the West African Senior Secondary Certificate Examination (WASSCE) in mathematics over four years. The results indicate that majority of the students failed to obtain a 50% pass in mathematics. For instance, in 2011, 1,580630 candidates sat for the examination. Of these, only 540,250 representing (38.2) % obtained the 50% pass mark while the remaining 1,040,380 candidates, representing (61.8) % of the total, failed. In 2012, out of the 1,768,923 candidates examined, only 635,634 (38.8%) passed at the 50% credit level while the remaining, 1,133,289 representing 61.2% candidates failed the subject. Similarly, 2013, out of 1,543,683 candidates examined in mathematics 978,696 representing 63.4% of the examined candidates failed to obtain credit in the subject. In 2014, out of 1,692,435 candidates examined 1,163,010 representing 68.7% could not meet the required 50% credit pass level (The *Guardian Nigeria Newspapers*, 2012; The *Guardian Newspaper*, August 11, 2014; The *Vanguard Newspapers*, 2013; WAEC, 2012).

**Table 1. Statistics of students' enrolment and performance in mathematics (2011 -2014)**

| Year | Total entries | No. present for exam | No. obtained 50% pass and above | No. failed (below 50% pass) |
|---|---|---|---|---|
| 2011 | 1,587630 | 1,580630 | 540,250 (34.2) | 1,040,380 (65.8) |
| 2012 | 1,768924 | 1,768923 | 635,634 (38.8) | 1,133,289 (61.2) |
| 2013 | 1,689188 | 1,543683 | 564,987 (36.6) | 978,696 (63.4) |
| 2014 | 1,705976 | 1,692435 | 529,425 (31.3) | 1,163010 (68.7) |

**Source:** Test Development Division West African Examinations Council (WAEC, 2011–2014), Yaba, Lagos; The *Guardian Newspaper*, August 11, 2014; The *Vanguard Newspapers*, 2013

In addition to the generally poor performance of students in mathematics, the West African Examination Council (WAEC) Chief Examiners' reports have also indicated that some topics in solid geometry (e.g. latitude and longitude ) have posed a major problem area for students at the senior secondary school level. According to the reports (WAEC, 2007; 2010), candidates have generally shown a lack of understanding of the questions and have failed to address them adequately, according to the reports:

> Many of the candidates could not read and carry out the instructions needed to solve problems. The candidates sometimes misread the questions and thus failed to understand what they were required to find. They lacked the skills and techniques of presenting their answers coherently (WASCE, 2007:237). Latitude and longitude questions were popular among the candidates. However, many of them failed to find the latitude of a point. The barrier was their inability to form the equation such as D=Ø/360 x2πR" (WASSCE, 2010:242).

Research findings reveal that most of the mathematics teachers lacked pedagogical approach to teaching topics such as latitude and longitude in solid geometry to their students (Akintade, Ogbonnaya & Mogari, 2013). When a teacher lacks the approach to teach particular content, it becomes difficult for him to transform content knowledge into a form that students can

easily understand (Shulman, 1986). The conventional teaching methods adopted by subject teachers could be one of the reasons for students' inability to address latitude and longitude questions adequately during the examination.

In recent years, education reforms in many countries have advocated a shift from a teacher-centred to a student-centred method of teaching (Panaoura, 2012; Hansson, 2010). Many reforms have also encouraged the use of different forms of ICT in the teaching of mathematics to improve students' learning (Adedamola, 2015; Ahmed, 2013; Chang, Sung & Lin, 2006). Panaoura and Philippou (2007) consider computer-assisted instruction (CAI) as a learner-centred method that allows students to progress at their own pace as they work individually or in groups. CAI is interactive and can illustrate a concept through attractive animations, sound and demonstrations. It provides immediate feedback, letting students know whether their answers are correct or not. If the answers are not correct, it gives prompts/tips to enable them answer the question. In addition, most CAI software has links to an array of related websites that can further help students in mathematics.

With all the efforts concentrated on improving students' performance in mathematics, there seems to be a dearth of studies on the effectiveness of CAI on students' achievement towards solid geometry topics such as latitude and longitude. The apparent lack of literature on the use of the CAI strategy in the teaching of these aspects of mathematics, and the diverse findings of studies on the effectiveness of CAI in teaching other aspects of mathematics and other subjects, justifies a need for this study.

**Theoretical framework**

For a CAI program to function holistically and give impetus to students' psychological and cognitive development, it requires a supportive theoretical foundation. This theoretical foundation, however, gives integrity to the design and structure of the CAI program (Alesi &Trollip, 2001). This study is theoretically underpinned by social constructivism learning theory (Vygotsky, 1978).

Social constructivism, developed by Vygotsky (1978), emphasizes how meanings and understandings grow out of social encounters. This learning theory claims that knowledge is constructed based on personal experience and hypotheses of the environment and that learners continuously test these hypotheses through social negotiations (Kozulin, 2003). It argues further, that knowledge is not necessarily received but actively built up by the cognizing subject, and that the function of cognition is adaptive and serves the organization of the experimental world (Adendoff & Etten, 2015). In reaction to didactic approaches such as behaviourism, Vygotsky, (1978) and Brunner, (1966) believed that learning is an active, contextualized process of constructing knowledge rather than acquiring it.

According to constructivists, appropriate teaching may include a number of components such as genuine discussion, cooperative group work, project work and problem solving for engagement, mastery of an autonomous project, exploration and investigative work (Sprandlin, 2009). Learning as a social process occurs when people are engaged in social activities (Millar, 2010). To social constructivists, motivation is both extrinsic and intrinsic; it is a reaction to positive and negative reinforcements. Students learn faster when CAI software is used to present new topics or teach perceived difficult topics, and when students are actively involved in the learning process through group interactions, quizzes, simulations,

explorations and other varieties of CAI techniques(Alesi &Trollip, 2001). For instance, when teaching a theorem stating that "The sum of the three interior angles of a triangle is 180 degrees", a teacher practising social constructivism would present the idea of moving the three angles together to calculate the sum and would then have students discuss it or share their ideas about moving angles. Students would be allowed to tear the triangle apart and experiment with different ways of making three angles come together again. With this manipulation, students would find that many of their ideas about moving angles would produce three angles forming a straight line indicating an angle of 180°. The teacher in this case acts as a coordinator after planting a powerful mathematical idea in a personally meaningful context for students to investigate.

**Overview of Solid Geometric topics in Mathematics**

In mathematics, solid geometry is the traditional name for the geometry of three- dimensional Euclidean space (Abakpa & Iji, 2011; Akinsola & Igwe, 2011). It is based on the use of algebraic equations and geometric calculations to provide measurement data regarding the width, depth and volumes of a give object or group of objects. There are two types of geometric shapes namely; 2D and 3D. Some of the 2D topics are incidence of planes and lines, triangles, parallelograms, circles etc. Basic 3D topics that have surface area and volumes include the following; cubes, rectangular prism, cuboid, cylinder, cone, sphere and hemisphere, latitude and longitude, prism, pyramid, etc.

Of interest to the researchers is latitude and longitude, that is linked with sphere and hemisphere. Latitude, which is defined with respect to an equatorial reference plane, is a parallel mark and distance measured north or south from the equator (William, 1996). Latitude is a geographic coordinate that specifies the north-south position of a point on the earth's surface.The most important line of latitude is the equator (0°). The North Pole is 90° North (90° N) and the South Pole is 90° South (90° S). All other lines of latitude have a number between 0° and 90°, either north or south of the equator. Some other important lines of latitude are the Tropic of Cancer (23.5° N), Tropic of Capricorn (23.5° S), Arctic Circle (66.5° N) and Antarctic Circle (66.5° S). Harwood (2011) describes longitude as angular distance measured east and west of the prime meridian (Greenwich meridian). The prime meridian is 0° longitude. As one travels east from the prime meridian, longitude increases to 180° and as one travels west from the prime meridian, longitude increases to 180°.

**Meaning and usefulness of CAI**

The literature reveals that the usefulness of CAI in the classroom is very extensive. Several studies have evaluated its impact on students' achievements and concluded that, supported by holistic approaches that include appropriate policies, infrastructure, professional development and curricula, CAI can help produce positive outcomes (Light & Pierson, 2011). Ozmen (2008) outlined the numerous unique features of CAI that make it an exciting field. These include the fact that the computer as medium of instruction in mathematics classrooms has the ability to record and store all the students' responses. In addition, it can use this information to decide the next information needed by students. It has the ability to branch out not just in terms of one answer but also in terms of a whole series of previous answers. The use of CAI in the mathematics class affords students the opportunity to record the time taken to answer a question and the degree of correctness to determine which branch to take. Hence, the computer can be used to help a student in all areas of the curriculum.

In spite of the benefits of CAI in the classroom, various research studies (for example, Olawoye & Salman, 2008) have argued that gender inequality in mathematical achievement has remained a perpetual, universal phenomenon and, indeed, in Nigerian schools. Although, giant steps had been taken by various organizations to bridge the gap, the issues in mathematics learning remains controversial, and results of studies appear inconclusive (Abiam & Odok, 2006). It is argued that male superiority in mathematical achievement exits at virtually all levels of education. Research findings have revealed that boys show a more positive attitude towards mathematics and science-related subjects and perform better on achievement measures than girls students do (Tabassum, 2004). However, other researchers have argued against male superiority in mathematical achievement. Ogunleye and Babajide, (2011) reported an equivalent growth trend in mathematical achievement between the two genders from their longitudinal research study.

It is against this background, and in the belief that the introduction of CAI in the teaching and learning of solid geometric topics (such as latitude and longitude), may help to foster students' achievement, and bridge gender inequality gap, that the researchers was motivated to carry out the study. Specifically, the study investigates the effectiveness of the CAI method of teaching solid geometry on second year senior secondary school (equivalent to grade 11) students' in Ogun State, Nigeria.

**Research objectives**

The purpose of this study was to investigate the effectiveness of computer assisted instruction on students' achievement in solid geometry in Ogun state, Nigeria.

The objectives of the research are as follows:

1. To examine the effectiveness of the CAI method on students' achievements in solid geometry in comparison with the traditional method of teaching;
2. To compare the achievements of female students and their male counterparts in solid geometry in comparison with the traditional method of teaching.

**Research Hypotheses**

The following stated null hypotheses were tested at $P < 0.05$ level of significance

**$H_{01}$:** There is no statistically significant difference in students' learning of solid geometry when taught with CAI method.

**$H_{02}$:** There is no statistically significant gender difference on students' performance in solid geometry when taught with CAI method.

**Methodology**

The study adopted the quantitative research method, described as a systematic empirical investigation of social phenomena via statistical, mathematical or computational techniques within the blueprint of pre-test, post-test non-equivalent control group, quasi-experimental design (Creswell, 2013). The research design is symbolically presented below:

$N_1$: $O_1$ $X_1$ $O_2$ Experimental Group I (CAI)
$N_2$: $O_1$ $O_2$ Control Group II (traditional method)

The first row represents the experimental group. The second is the control group. $O_1$, $O_2$, represent pre-test and post-test; $X_1$ represents the treatment and $O_1$ and $O_2$, were tested for statistical significance, using the analysis of covariance (ANCOVA). The choice of the quasi-

experimental design method using pre-test, post-test non-equivalent control groups allows investigation of intact groups in real-life classroom settings since it was not easy to randomly assemble students for any intervention during school hours so as to avoid any artificial conditions.

**Participants**

All the 2nd year Senior Secondary School mathematics students in Ogun State comprised the population of the study. Specifically, the participants in the study were three hundred and twenty (320) Senior Secondary School mathematics students from Odeda Local government area. The selected four schools were coded: experimental school 1 and experimental school 2 (E1, E2); control school 1 and control school 2 (C1, C2) (Egba/Odeda axis) in the state, while the participated students were randomly assigned to two groups (control and experimental). Further to the selection of experimental and control schools for the study, the researchers visited the selected schools and met the principals, senior school mathematics teachers and students to solicit their cooperation for the smooth conduct of the study.

**Instrument for data collection**

The achievement test on solid geometry (ATSG) was developed, and used by the researchers for data collection in the study. The validated five (5) test items were essay-type cognitive test that required students' higher-order cognitive skills of Bloom's taxonomy, and objectives of solid geometry, as contained in the mathematics curriculum for senior secondary (WAEC, 2008). The instrument was used for pre-test and post-test in both the control and experimental groups. Cronbach Alpha computed to determine the internal consistency, and reliability of the test was 0.84 which indicates that the test items are reliable and moderate difficulty level.

**Data Analysis**

The data collected from the pre-test and post-test were used to answer the research questions and test the stated hypotheses. The research questions were answered using descriptive statistics, while the null hypotheses were tested using ANCOVA at the 0.05 confidence level. The mean results of the two classes on the pre-test, post-test level of students' responses and gender, were compared for a possible significant.

**Findings**

In order to determine the baseline knowledge and equivalence of the two groups, the researchers pre-tested students in both the control and the experimental groups.

***Pre-test scores for the two groups***

From Table 2 the pre-test mean score for the control group is 9.23 while the pre-test mean score for the experimental group is 10.49. The results of the two groups revealed students' baseline knowledge in latitude and longitude, and the equivalence of the two groups. This indicates that none of the groups have gained any knowledge of the topic before now; hence the two groups were comparable in terms of their knowledge of the topic.

**Table 2: Summary of pre-test scores for the two groups**

| *Groups* | *N* | *Sum* | *X* | *Variance* |
|---|---|---|---|---|
| Control Group | 159 | 1469 | 9.23 | 71.60 |
| Experimental Group | 160 | 1679 | 10.49 | 60.00 |

***Post-test scores for the two groups***

A comparison of the control group post-test mean scores (40.83) and the experimental group post-test mean scores (54.13) as illustrated in the Table 3 shows that the CAI intervention improved students' performance in the experimental group. Experimental group students were taught with the CAI method of instruction before they were post-tested whereas, students in the control group were taught with the traditional method of instruction. The difference in the post-test means score for the two groups showed the impact of the CAI intervention in favour of the experimental group.

**Table 3: Summary of post-test scores for the two groups**

| *Group* | *N* | *Sum* | *Average* | *Variance* |
|---|---|---|---|---|
| Control | 159 | 6493 | 40.83 | 45.64 |
| Experimental | 160 | 8661 | 54.13 | 40.30 |

***Pre and post-test achievement scores based on gender***

The male students' pre-achievement mean scores and the standard deviation (M = 10.84, S.D = 8.21) compared to the female students' pre-achievement mean scores (M = 10.73; S.D 8.04) was not significantly different in the experimental group. Similarly, the post-test achievement mean scores, and the standard deviation for male students (Mean = 54.04; S.D = 9.66) compared to the post-test achievement mean scores, and the standard deviation for female students (M = 53.98; S.D = 9.66) were not significantly different after the intervention as illustrated in the Table 4. This indicates that female students attain almost the same achievement scores as their male counterparts when taught the concept of latitude and longitude through the use of the CAI mode of instruction in the mathematics classroom.

**Table 4: Pre and Post-test achievement scores based on gender**

| | Control Group | | | | | Experimental group | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Gender | N | X | SD | SE | Gender | N | X | SD | SE |
| Pre-Test | Male | 85 | 9.65 | 8.42 | .643 | Male | 87 | 10.84 | 8.21 | .647 |
| | Female | 69 | 10.33 | 8.43 | .672 | Female | 75 | 10.73 | 8.04 | .642 |
| Post- | Male | 85 | 40.87 | 9.25 | .756 | Male | 87 | 54.04 | 9.66 | .761 |
| Test | Female | 69 | 40.85 | 9.41 | .761 | Female | 75 | 53.98 | 9.52 | .760 |

To test the stated null hypotheses for the study, Analysis of Covariance (ANCOVA) was employed by the researchers using SPSS version 20. ANCOVA was used to examine whether a significant difference existed between the post-test scores for the two groups when the pre-test scores was held constant.

**Hypothesis One**

Null hypothesis $\mathbf{H_{01}}$**:** There is no statistically significant difference in students' learning of solid geometry when taught with CAI method.

From Table 5, the pre-test scores are evidently predicted and influenced the participants' computer assisted performance as the significance value is greater than 0.05(p=0.643). The significant result at level P< 0.05 indicates a less than 5% chance that the result is due to randomness. The flip side of this result indicates a 95% chance that the difference in the post-test achievement scores between the two groups is real difference and not simply due to chance. The null hypothesis ($H_{01}$) therefore is rejected because there is a significant effect of the independent variable on the dependent variable; meaning that the use of computer assisted instruction to teach solid geometric topic such as latitude and longitude is superior to the traditional method of teaching.

**Table 5: Summary of ANCOVA on students' achievement based on gender**

| Source | Type III Sum of squares | df | Mean square | F | Sig. | Eta Square |
|---|---|---|---|---|---|---|
| Corrected model | 18463.312[a] | 12 | 1538.609 | 45.732 | .000 | .648 |
| Intercept | 205562.709 | 1 | 205562.709 | 6.110E3 | .000* | .953 |
| Covariates(pre-test) | 3466.746 | 1 | 3466.746 | 103.043 | .000* | .257 |
| Treatment | 12153.382 | 1 | 12153.382 | 361.238 | .001* | .548 |
| Main effect Gender | 134.375 | 1 | 134.37 | .008 | .987** | .001 |
| Class Subject | 3.962 | 2 | 1.981 | .059 | .943** | .000 |
| Total | 738520.000 | 311 | | | | |
| Corrected total | 28489.132 | 310 | | | | |

a.R Squared =.648 (Adjusted R Squared=.285)

*Denotes significant;**Denotes not significant at 0.05 alpha level.

**Hypothesis Two**

Null hypothesis $\mathbf{H_{02}}$**:** There is no statistically significant gender difference on students' performance in solid geometry when taught with CAI method.

As observed from Table 5 ($F_{(1, 310)}$ = 0.008, p=0.987, $n^2p$=0.001) the effect of gender is not significant. The result shows that male students' performance does not differ significantly from that of their female counterparts when they are taught solid geometry topic (e.g latitude and longitude) with the use of CAI and the covariate (pre-test) is statistically controlled. The result reveals that the significance of F = 0.987 is greater than 0.05 alpha levels. This indicates that the use of CAI to teach both male and female student does not produce any significant difference in their post-test performances. Thus, we uphold null hypothesis two that there is no statistically significant difference between students' achievement in latitude and longitude for the two groups based on gender when exposed to the CAI method of instruction.

**Discussion of Findings**

Based on the results of the students' pre-test scores, it was evident that the two groups have not gain any knowledge in latitude and longitude; a solid geometric topic. Hence, they were

found homogeneous in term of their performances. After the intervention, students' performance reveals an improvement in their post-test scores. The study revealed a significant difference between the students' achievement in latitude and longitude for the control and the experimental groups, and the difference favours the experimental group. Post–test results revealed a statistical improvement in the experimental schools (M=54.82; SD= 7.43; *n*=160) in comparison to the control schools (M=40.83; SD=6.75; *n*=159). The results of this study indicate that a significant difference exists between the post-test means scores of the control and the experimental group. Hence, CAI is effective in promoting students' achievements in solid geometric topics such as latitude and longitude.

This finding supports earlier findings (Awolola, 2011; Akay & Boz, 2010; Ogbonnaya, Mogari, & Mji, 2014) which associate improved content learning to learners'-centred teaching strategy. The finding supports the assertion of Awofala and Nneji (2012) and Akinsola and Igwe (2002) that such a strategy can promote students' achievements significantly in subject content. The findings are consistent with the studies of Kumar (2010), Singh (2010) and Hsu (2003), who reported that CAI is a useful tool in enriching, supporting, and mediating the learning of mathematical concepts. This was obvious in the experimental group, which was taught according to the CAI strategy, as they exhibited a higher achievement level than their counterparts who were taught using the traditional method of teaching.

The non-significant main effect of gender on students' achievement in solid geometry is in line with previous studies (Fatade & Nneji, 2012; Mohd et al, 2011; Kogce et al, 2009) who reported a non-significant main effect of gender on students' performance in science and mathematics. This finding is consistent with earlier findings (Balam, 2015; Ericikan, McCreith& Lapointe, 2005) that no significant differences exists in achievement between boys and girls as they start getting acquitted with mathematics. The finding supports the studies of Croxford (2000), who believed that the intellectual potential of girls is an untapped labour resource for science and technology in England and Wales. Finding of the study is also consistent with those of Meltem and Serap (2007) that reported a non-significant difference in mathematical achievement between girls and boys in the school system. However, the study is at variance with the results of Awofala, Arigbabu and Awofala (2013) and of Ok'wo and Otubar (2007), who proposed that gender, stereotyping is still dominant in the Nigerian educational system.

This, notwithstanding, results of this present study revealed that female students attain almost the same achievement scores as their male counterparts when taught solid geometry through the use of CAI strategy in the mathematics classroom. The result of the study suggests that CAI strategy did not produce any significant difference in their post-test performances.

## Conclusion

In conclusion, the findings reveal that the CAI strategy could be an effective medium of instruction for teaching solid geometry in Nigerian secondary schools. It has the potential of not only improving students' achievement in solid geometry but also influences their attitude towards mathematics.

1. The findings support the initial hypothesis that the use of CAI to teach solid geometry to Nigerian students improves their performances on the topic.

2. The findings support the claim that CAI strategy did not produce any significant difference in students' post-test performances based on gender.
3. The claims that using the CAI intervention would improve students' achievement towards solid geometry are therefore sustained.

**Recommendations**

Findings from the study have shown that CAI improves the performance, learning achievements and attitudes of students in solid geometry with reference to the concept of latitude and longitude. The researchers, therefore, recommend the following proposals.

The CAI strategy should be implemented in the teaching and learning of all other perceived topics in solid geometry, and mathematics in Nigerian secondary schools in order to enhance students' performances. The adoption of the CAI teaching strategy in Nigerian secondary schools would allow students to progress at their own pace, work individually or solve problems in groups. The strategy would motivate students to learn, arouse their interest and consequently, improve their performances in mathematics.

Both the NUC and NCCE should emphasize the need for teachers to be more computer literate because lack of computer knowledge among teachers will decelerate the implementation of CAI programs in schools.
Periodic seminars and workshops should be organized for mathematics teachers, with emphasis on the use of CAI to teach perceived difficult topics in order to minimize students' failure rate in mathematics.

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# TALENT MANAGEMENT AS A STRATEGY FOR ORGANISATIONAL RENEWAL: A STUDY OF UNIVERSITY OF EDUCATION, WINNEBA. GHANA

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**Abstract**
Universities are the fountains of knowledge for individuals, communities and national development. This study focused on talent management in higher education institutions in Ghana with particular reference to the University of Education, Winneba. In Ghana and also on the African continent universities have the unique role as catalyst for development. They not only lead in socio-economic and political development through research but more importantly train, educate and produce the human resources needs of the countries. The roles of universities in Ghana are hampered by a plethora of challenges such as heavy teaching load, poor remuneration and lack of resources. As a consequence of these challenges the universities find it difficult to retain the best academics in order to effective fulfil their mandate. The assumption of this study is that for universities to retain best academics they need to manage talent. The study used qualitative research methods of observation and interviews to explore ways and means to manage talent at the University of Education, Winneba, in Ghana. Out of the total population of 200 eligible participants 20 were selected to purposively to participate in the study. The study found that the current human resources practices do not cover management of talent which is why the institution finds it difficult to retain some of its best academics. The study recommended that in order to become the best among its peers the university should make talent management a priority.

**Keywords:** Talent Management, Human Resource, Retention, Labour Turnover, Job Satisfaction.

## INTRODUCTION

In the contemporary modern world the advancement of every nation depends on the knowledge and skills (human capital development) of its citizens. Human resources are used to tap natural resources for the advancement of the country (Jackson & Schuler, 2007). In an era of knowledge economy education – i.e. knowledge and skills- are important things which citizens of every country require to be able to contribute to nation building at all levels. The realization of the fact that lack of education hampers national development motivates developing countries to devote much energy, time and resources for the development of human capital (Jackson & Schuler, 2007). As Quan-Baffour (2000) attests, a country may be described as developed when a larger part of the population or its human resources are well developed and put to the maximum use for the benefit of all citizens. Thus, the level of human resource development is an important indicator of a country's development. In realizing the importance of human capital for national development, developing countries establish institutions of higher learning to serve as the source of knowledge generation and production for the achievement of sustainable national development.

In Ghana and in Africa as a whole universities have the unique role to play as the catalyst for national development. Universities lead in socio- economic and political development

through teaching, research and community engagement activities. They train, educate and produce knowledge and skilled man-power such as medical practitioners, engineers, nurses, teachers, accountants, planners and managers to contribute to national development. In Ghana, in particular, the roles of universities are hampered by a plethora of challenges such as heavy teaching load, poor remuneration and lack of resources. As a consequence of these challenges the universities find it difficult to retain the best academics in order to effectively fulfil their mandate as catalyst for national development. It is assumed that for the universities to retain the best academics they need to renew themselves through the management of talent. It is further assumed that in an effort to renew themselves the universities in Ghana may grant their academic staff opportunities for growth in knowledge and skills.

## THE CONTEXT OF THE STUDY

Ghana achieved political independence fifty seven (57) years ago but inadequate relevant knowledge and skills among most of its citizens is still a hindrance to the country's economic and infrastructure development. In order to improve the overall human capital of the country institutions of higher learning need to re-skill their academic staff to be able to address its socio economic needs and challenges. It is assumed that a more knowledgeable and skilful university staff would be able to contribute to development of human resources needs of the country.

This paper was based on a case study conducted at the University of Education in Ghana. The university is one of the 10 public universities in the country with the mandate to educate the country's citizens for assurance of equal opportunities, democracy and the overall advancement of the nation. As a developing country Ghana needs to improve its human capital to ensure continuous development. Education is thus not only a catalyst but also the engine for development. Although the University is relatively new (opened in 1992) it has made valuable contribution to the socio-economic development of the country. Responding to the call for quality education the university has diversified its courses and mode of delivery to ensure that it's presence is felt in every district of the country. It offers distance education and sandwich programmes in addition to the conventional university teaching and research activities. The university uses the traditional human resources management where the development and management of talent is not focused. As a relatively new university which has become very popular among citizens of the country the institution needs to develop and manage talent in order to retain its best academics. The development, nurturing and management of talent of academic staff can improve their current and future job performances, while concurrently best utilizing human assets in order to improve the competence of the organization itself. A well-developed and implemented human resource development system should therefore be an integral part of the institution's strategic plan to benefit both the employee and the university. It is argued here that the human capital of a university can enhance its teaching and research activities which is why worldwide universities try to manage their employees properly to ensure that they stay with the institutions. This is what in human resources parlance referred to as *talent management* (Dries, 2013). The onus is therefore on the human resources department of any institution of higher learning to manage talent in such a manner that ensures the acquisition of the competencies and knowledge needed for educating and training people for the country's development endeavours. Carneiro (2001) aptly intimates that an organization should have the capacity to exploit its knowledge and learning capabilities, as a competitive strategy.

Cullen (1999) adds that the significance of both individual and organizational learning is done to develop organizational capacities. This is because capacity building is the bedrock of human resource development in any organization that wants to remain viable.

## PROBLEM STATEMENT

As a human resource practitioner for the University of Education, Winneba, for over 10 years the leading researcher observed with keen interest how human resources management at the university of Education, Winneba, is characterized by the traditional and outmoded clinical administrative practices of record keeping inherited from the British colonial authorities. It thus lacks the recognition of the African context and cultural practices which put people first. In a true African management culture the focus should be on identifying, developing, nurturing and managing talent as a strategy to increase productivity and retention of the institution's best staff. In the wake of the war on talent, (i.e. serious competition among universities for the best brains) it is important for the university to develop, nurture and manage its talent to ensure that it has a competitive advantage over its peers. This case study was set up to explore how talent management can be used as a strategy to renew the University of Education in Ghana as academic organization.

### Objective of the study

The main objective of the study was to identify the gap in talent management practices at the University of Education, Winneba, and provide suggestions to fill in the gap. The study thus focused on exploring ways and means of managing and retaining talent at the University, as a shrewd strategy for the institution to renew itself, enhance productivity and improve its image and status.

## THEORETICAL FRAMEWORK

This study focused on employer- employee relationship and how such a relationship can improve the human resources base of an organization. It is therefore underpinned by the firm specific human capital (FSHC) theory which was propounded by Becker (1975). The concept *Human Capital* refers to the unique set of abilities and acquired skills that an individual gains through education and job training to improve employability, efficiency, productivity and earning power. Education is seen as an investment hence any investment in the training and educating of an individual in the long run benefits the individual, the employer and the country. Michele and Christopher (2015) affirm that if individuals acquire more education they will receive a higher rate of returns through wages. Human capital therefore features as one of the central elements of modern economic growth. It has become a common view among scholars that knowledge has the tendency to grow indefinitely because it can be endlessly re-used and combined in unlimited ways. The theory which emanated from the general capital theory argues that education and job training increases labour participation (Ni, Kenneth, Lisa & Carlos, 2010). Its central argument is that if firms need to bear the cost of training, their incentives to provide training will be lowered by high quitting rate of employees. Thus where labour turnover is high it may reduce the firm specific training investments. Even if employee turnover is low, firms may be reluctant to invest in general training if other firms can then hire away trained workers before the firm has recouped its training costs. To reduce possible 'poaching' of skilled employees some organisations stick to firm specific human capital (FSHC) training and share the cost of training with employees rather than general training as a strategy to reduce loses (Lynch 1993).

The proponents of the theory argue that even if firm specific human capital is improved through on the job training (i.e. *learning-by-doing*) its accumulation will always remain positively related to employees' tenure. As a consequent a higher turnover can lead to lower productivity. The FSHC which relates to the relationship between employees and the employer assists organisations to map out strategies to balance stability and flexibility of their labour force. It is based on conversations that can assist the organisations to identify the training needs of their employees so that training for specific skills can be offered to enhance productivity.

The FSHC theory is an important theoretical advancement element in labour economics because organisation's productivity falls whenever turnover increases and vice versa. This is why an organization should manage its talent to ensure increased productivity, employee satisfaction and retention. The originators and advocates of human capital theory i.e. Adam Smith (1776), Becker (1930) and Schultz (1961) agree that education and training are costly and should be considered as an investment as they are closely related to personal oncome differentials. Education is also perceived as both consumer and capital good in that it can be used to develop the human resources necessarily for economic and social development (Olaniyan & Okemakinde 2008). Along with this definition of the relationship between economic growth and education the individual pursuit of financial rewards for an investment in an education is naturally logical (Bai 2010). Human capital and indeed firm specific human capital (FSHC) is created by means of education, training or learning. The theory has effect on education, skills and training in that it has a positive effect on ones earnings status and working life. In an open economy with high levels of population mobility human capital is constantly being re-shaped by labour migration. For this reason any organization that wants to have a competitive advantage over its peers should make talent identification, nurturing and management a priority and a strategy for retaining the best employees.

The theory has serious implications for institutions of higher learning. They need to adapt to the changing environment because no organization can remain resistant to the need for processes that help to acquire and increase its capabilities for stability and renewal. Human Resource Development, particularly talent management, is seen as the means to achieve higher productivity, better relations and greater profitability for any organization or institution. Jackson & Schuler (2007) assert that organizations can use human resource management in a variety of ways to increase their human capital. For example they can "buy" human capital in the market (by offering desirable compensation packages) or make it internally by offering extensive training and development opportunities (Jackson & Schuler, 2007).

The need to identify, nurture and develop employee talent in any organization has been stressed in this paper but it can also be argued here that as much as employee training could enhance productivity there are certain possible negative impacts of employee turnovers on productivity during the training period. At such times an organization might need to hire temporary workers to hold the fort. It can also be argued that the resources invested in the recruitment and training could be invested in some other aspects of the production process to increase production because employees might return or not return to their post after receiving the training. It is also possible for an organization to increase production during the period

when full time employees are sent for training. The temporary workers who might want to be retained by the organization could work extra harder to enhance production.

## RESEARCH DESIGN AND METHODOLOGY

This was a qualitative study which took the form of phenomenological research. Phenomenological research method assists researchers to describe the phenomenon as it is and thus enables them to understand the meanings participants might construct and give about their experiences (Johnson & Christenson, 2000).

## RESEARCH DESIGN

From the interpretivist stand point truth (reality) is negotiated through dialogue. For this reason the researchers employed the interpretivist paradigm which relates to the FSHC conceptual framework in this study. The FSHC framework is aligned to the interpretivist paradigm where reality is constructed through meanings and understanding developed through interaction with people; in this case academic employees in an educational organization, the University of Education, Winneba.

Qualitative research tries to discover the inner feelings of participants hence it involves a dialogue between the researcher and the participants. This kind of research involves how individuals make meaning and understanding of issues from their perspective hence Wiersma & Jurs, (2005) intimate that qualitative design requires flexibility and tolerance for adjustment as the research progresses. The perception of those being studied is important; therefore, "these perceptions are to be captured in order to obtain an accurate 'measure' of reality. The 'Meaning' of experiences by those being studied; cannot be imposed (Wiersma & Jurs, 2005) but can be solicited.

Thus through dialogue (interviews and observation) data could be gathered on pertinent issues such as employee training needs, job satisfaction, causes of labour turnover, attrition and retention of knowledge workers. The interaction with participants assisted the researchers to understand the subjective (Cohen et al, 2000) and objective interpretation of their experiences. The researchers therefore employed the qualitative methods of interviews backed by observations to explore the human resources practices at the University of Education and their effects on staff attrition and retention. The qualitative approach was deemed suitable for the study because it addresses objectives of a study through techniques that allow researchers to provide elaborate interpretation of the experiences of the participants without depending on numerical measurement. Its focus is on discovering true inner meaning and new insight provided by participants rather than quantifying results (Zikmund, Babin, Carr & Griffin, 2013). The researchers adopted this design to enable them investigate the mechanisms the university can use to reduce attrition among academic staff, especially those who are granted study leave with pay.

## POPULATION AND SAMPLE

The entire population for the study comprised 200 academic staff members from all four campuses (Winneba, Ajumako, Kumasi & Mampong) of the University of Education who had the opportunity of study leave to upgrade their knowledge and skills since the past ten (10) years.

The researchers used both purposive and random sampling techniques to select participants for the study. They first used purposive sampling technique to identify 200 academics who have enjoyed study leave. The eligibility criterion used was that participants in the study should be UEW academic staff who have benefited from study leave for the past 10 years. After using purposive sampling to identify the 200 academic staff who have enjoyed study leave, a simple random sampling technique was used to choose twenty (20) participants from that number to participate in this case study. The participants were taken from all the four (4) campuses of the university.

## DATA COLLECTION

In this qualitative study a semi-structured 4 item interview schedule was administered on the selected participants. The participants were interviewed in their offices during lunch time (between 1-2pm). The one on one interview approach was used in collecting primary data because it allowed the researchers to ask follow up questions for clarification where necessary. Tustin, Lightelm, Martins and Van Wyk (2005) affirm that primary data is the original data collected specifically for solving the problem at hand. The interview covered pertinent human resources issues such as: how the university conducts its human resources development, the length of time academic employees work before being granted study leave, strategies the university uses to retain academic staff after study leave and measures used in retrieving funds from academic staff members who leave the university after their studies.

## MEASURES TO ENSURE TRUSTWORTHINESS

Trustworthiness of data is very important in qualitative research. Quan-Baffour (2015) affirms that trustworthiness relates to the level of dependability or reliability of the data gathering instruments, the process that was carried out when gathering the data, the quality of data gathered and their validity. As a measure to ensure trustworthiness or reliability and validity of research report the researchers recorded the interview information verbatim. They repeated the items for the participants to clarify responses which were not audible enough. Again the researchers kept a journal in which they wrote down all what they observed, heard and saw during the study. After the field work the data were scrutinized, pruned and arranged under related themes to ensure dependability and credibility of the results of the study.

## DATA ANALYSIS

The researchers employed the interpretive approach in analyzing the data. They pruned and arranged the interview texts under various themes or categories to make the information understandable and easy to report its meaning. They also read through all the interview transcripts received and wrote down ideas that emerged from the information before analyzing them manually. This was done to ensure that all responses were captured.

Citing Mouton (2004), Quan-Baffour (2015) attests that this approach to data analysis makes the various constitutive elements in the data clear through an inspection of relationships between concepts, constructs and variables and to see whether there are any patterns or trends.

## RESULTS AND DISCUSSION

This study was set up to explore the human resources practices at the University of Education, Winneba, in Ghana. In order to acquire the views of the academic staff, 20 of

them who had the opportunity to go on study leave with pay were purposively selected and interviewed. They were asked series of questions for their candid views on human resources practices at the University. The responses of the participants were arranged, analysed, interpreted and discussed under the following themes:

**Theme 1: Human resources practices at the University of Education.**
The participants were requested to talk about their experiences of how the university conducts its human resources activities. To this item various views were expressed which were summed up under two main facts. For example 90% (N=18) of the participants corroborated in their responses that the human resources practices at the university do not clearly focus on identification, nurturing and development of talent. The 10% (N=2) agreed that they have no idea of how the university operates in terms of developing its human capital base. As one respondent aptly put it, verbatim:

> *The human resources department at this university recruits academic staff but once here you do not see any clear guidelines on how the institution does develop its academic staff. In most cases academics upgrade themselves at their own cost. There is a colleague who recently completed his doctorate but the university has not agreed to pay back is expenses.*

The above responses from all the participants indicate that talent development and or management does not seem to be a priority in this university. As seen from the responses above the participants attest to the fact that they do not know of any clearly defined policy on management of talent in the institution. As many as 18 respondents corroborated in their responses that the human resources activities have no focus on talent management and this is serious in an era where there is a serious competition among universities for the best academics. What is also implied here is that the human resources practices are characterized by rendering the traditional clinical services such as recruiting staff, processing of appointment, vacation leave, retirement etc to academic and other employees. Academics who want to upgrade their qualifications may not get support from the employer and in that case their loyalty cannot be taken for granted.

**Theme 2**: **The length of service before being granted study leave.**
All the respondents 100% ( N=20) agreed in their responses that at the present moment there is no clear policy on the number of years an academic can serve the university before s/he can be granted study leave with pay. They also agreed in their responses that the lack of a clear policy on the length of service before qualifying for study leave could put many academic staff members at a disadvantage. One of the participants from a smaller campus had this to say, verbatim:

> *There is a possibility of nepotism here because the first come first served does not work We often see one or two colleagues are on study leave but do not know how they got it. If you know somebody here your matter gets priority attention if even you have worked for only 3 years. We need a clear policy on this for the sake of fairness to all.*

It can be deduced form the above responses that academic staff members are not very satisfied with the situation where there is no clear policy on the length of time one can serve

before being granted study leave either within the university or outside the university. Where there are no guidelines on the duration of service nepotism may be practiced as has been alluded to by one of the participants above. As the response above indicates if you know somebody in 'high place' you can be considered within a short time. The respondents agreed that there is a need for a clearly laid down policy on study leave to ensure fairness among all academic staff members of the university. In that way all staff members may know for how long they can serve the institution before requesting to be sponsored for further studies. The responses also infer that academic staff are calling for transparency in the procedure for granting of study leave with pay. Where the conditions for securing study leave with pay are clear and transparent it may reduce rumour and possible nepotism. Again the academics who cannot wait for their turn might decide to study while they work or take leave without pay to upgrade themselves.

**Theme 3: Strategies the university uses to retain academic staff after study leave**

Regarding strategies the University's human resources put in place to retain academics who upgrade themselves or return from study leave, the respondents were divided. For example while 12 of the 20 respondents (constituting 60% of the participants) said they were not aware of any clearly defined strategies to retain academic staff who upgrade themselves 8 out of the 20 participants (i.e.40%) corroborated in their responses that academics who study to obtain higher qualifications are rewarded with new salary notches. All the 20 participants however agreed that one notch salary adjustment is not enough to recognize the knowledge and skills one acquires through further studies. Twelve (12) of the 20 participants (i.e.60%) pointed out that the one notch salary increment is ridiculous. As one respondent put it verbatim:

> *The university must do more than increasing one's salary by only one or two notches. Recognition must go beyond another salary notch. The whole conditions of employment need to change with the acquisition of new and higher qualifications.*

Indeed salary adjustment alone is not enough to retain good academics because some other universities can lure them with higher pay and better general conditions such as provision of medical aid, promotion to next rank and paying fees for their dependents. Thus as one respondent alluded to in the above paragraph, to retain academics who upgrade themselves a university should revise their entire conditions of service to minimize being '*poached*' by other institutions. This should be a strong strategy to fight the *war on talent* which is raging on all over the globe among universities.

**Theme 4: Measures to retrieve funds from academics who might leave the university after study leave opportunity**

The participants were asked about the measures the university take to retrieve funds e.g. salaries spent on academics who were given study leave with half or full pay but decide to leave the services of the institution on completion of their studies. Although all the respondents agreed that they do not know what happens to such employees, 11 of the 20 respondents (i.e.55%) were of the view that such people should be made to pay back all salaries they earned during the time they were on study leave. Where they fail the university can touch their pension contributions for the payment thereof. Thus as pointed out in the discussion under theme two above a clear policy on study leave with pay may go a long way

to reduce such unpalatable situations. If academics know the consequences of not serving a particular term after study leave they may oblige. In any case a serious measure to retrieve funds from those who default may serve as deterrent to others who might try to cheat the university financially.

## CONCLUSION

This paper set out to explore how talent is identified, nurtured, developed and retained at the University of Education, Winneba, as a shrewd strategy for the university to renew itself, enhance productivity and retain its best academic staff. The researchers used qualitative methods of interview and observation to collect data for the study. The study found that the current human resources practices at the University of Education, Winneba, do not cover management of talent. The human resources department of the university has not moved beyond the clinical traditional practices of recruitment, placement and administering of leave claims etc hence the institution finds it difficult to retain some of its best academic staff. The study concluded that in this era of ever raging *war on talent* any institution that wants to be ahead of others or be able to compete very well with its peers should identify, nurture and develop its human capital and provide its employees with competitive conditions of service.

## RECOMMENDATION

The study recommended that:

- in order to become the best among its peers the university should make talent management a priority
- to ensure retention of the best of its academics the university should revise its conditions of services for academics
- the university should put in place a clear policy on study leave to ensure that all academics are treated equally when they apply for study leave.

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# PERCEPTIONS OF SCHOOL STAKE HOLDERS ON SCHOOL GOVERNING BODY ELECTIONS IN RURAL AREAS: ARE STAKE HOLDERS KEEN TO PARTICIPATE?

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## Abstract
This study explores school stakeholder's perceptions on being elected as a School Governing Body (SGB) member in the rural Kgetleng River Area Project Office (APO) an area office in the North West province. Participants were 54 in all comprising 12 learners, 12 educators, 6 principals and 24 parents who were school governing body members. There were 30 women and 24 men with ages ranging between 17 years and 55 year. Participants indicated their views on a Likert type scale on their views on being elected members of the SGB. As the scale was author developed, validity and reliability of scores from the scale are reported. Results indicated that three subscales emerged, where participants indicated their lack of eagerness to be elected as SGB members was due to (a) lack of knowledge in governance (b), to be seen by colleagues as the principal`s sycophant and (c) working for no payment. Further, in spite of the powers given by governmental authority, school stakeholders felt that communities should be taught the importance of taking part in the education of their children. It is recommended that further studies should be conducted to determine the efficacy of the questionnaire used here in other contexts and samples.

**Keywords**: School Governing Body (SGB), Stakeholders, Communities, South African Schools Act, Elections

## Introduction
School governing body is a group of people either elected or appointed by the majority of parents to govern the school. The SGB represents the school and its community. The constitution of South Africa affirms and also encourages participation in democratic institutions. The work of the governing body is to promote the best interest of the school and to ensure that learners at the school receive the best education possible. The constitution indicates that democracy should not only be seen in the governance of the country but also in the running of schools. The introduction of the institution of school governing bodies in the schooling system is aimed at building a caring, accountable and value driven nation. It has to be indicated that before 1994, SGB were non-existent. What used to happen was that our school were governed by school committees who were not democratically elected. The Department of Basic Education (DBE) emphasises that the governance of schools has to be seen as an effort to entrench democratic principles in running the school; on the other hand it should be viewed as a way of having a hands-on kind of approach to governance in schools by involving stakeholders and empowering them with leadership skills (Karlsson, 2002). In 1996 the South African Schools Act (SASA), brought about a new way of running the South African education system. It indicated that the governance of the public schools needed an active participation of parents, educators, learners, workers and business people and other members of the community (Molepo & Mji, 2014). The main purpose of the SGB is to help the school to provide high quality education for all the children in the school. It is the competency of the SGB to look into the challenges that the school encounters, that make it

impossible or difficult for the school to run smoothly. These can be challenges such as drug abuse in the school, lack of fencing, lack of proper school buildings, lack of text books, poor toilet facilities and generally dilapidated buildings and bad relations between the school and the community. It is the responsibility of the SGB to look into means and ways of sorting out these afore-mentioned challenges. It is therefore important to note that the SGB is to be in office for three years but this can be extended when during the next elections, the said member is re-elected. The aim of this study is to see as to whether stakeholders are keen to take part in the SGB elections and if not, why are they not keen.

The DBE has a responsibility to see to it that after every three years the new members of the SGB are chosen. The Member of Executive Council (MEC) of education of different provinces has to advertise and bring information to stakeholders about the impending elections. Media such as radios, newspapers and television are used to encourage parents to get involved in the SGB elections. The SGB elections take well over a million parents voting for their peers to fill over 100 00 places (Bojanala West Newsletter, 2003).This to parents is a show of democracy because it is only during the national, provincial and local government elections that parents cast votes. This, some parents view as important and even show the seriousness of the government in making South African institutions democratic. The elections of the SGB do not happen unsystematically. The DBE developed the National Guidelines for School Governing Body Elections so as to make the election to have a common guideline in all the nine provinces. The National Guidelines for School Governing Body Elections are done in the spirit of the South African Schools Act No.84 of 1996 where it is stated that it is there to provide for a uniform system for the organisation and governance of all schools; to redress past injustices in ensuring equitable and democratic transformation of education; to develop our peoples` talents and capabilities; and to facilitate community involvement in the education of their children (Molepo & Mji, 2014). It has to be stated that before SASA was passed into law, most parents did not take the responsibility of involvement in the education of their children serious. As indicated above, the SGBs are statutory bodies according to SASA and the SGB stands in a position of trust towards the school. South Africa has nine provinces. The Provincial Members of the Executive Council (MEC) for education determines elections procedures within the framework created by the South African Schools Act (SASA). It has to be accentuated that the nine provinces have conditions that are not the same. As a result, every province has its own specific regulations for SGB elections which are approved by provincial legislatures. These ultimately result in the fact that SGB elections are not identical, or truly national. What happens is that the SGB elections are governed by national guidelines and each MEC for education with his or her provincial department of education adapt his/her election regulations based on the national guidelines (Molepo & Mji, 2014).

**Theoretical framework**

A school is an organisation, that is, a group of people working in a relationship with each other to achieve a certain goal. These groups of people in the school include educators, learners, support staff, School Management Teams (SMT), SGB members, members of the community and the department of education. This paper looks into school stakeholder's perceptions on being elected as a School Governing Body (SGB) member in the Kgetleng River Area Project Office (APO). We look into how easy or difficult is it to be elected into the SGB, this paper again looks into perceptions of candidates before they are elected into office. It has to be stated that the SGB deals with the governance aspect of the school. This

aspect relates to issues that arise at a school but do not relate to the professionals. So, governance relates to how the school is run but not how the professional educators are managed. It is the government`s responsibility and wish to see to it that elections in all schools are seen to be free and fair. The democratic elections of the SGB s are aimed at the creation of legitimate SGB s in every school. The said democratically elected SGB are critical to: contribute towards the eradication of poverty and towards economic well-being of our society; to improve the quality of education and ensure that schools serve the interest of the community and meet the expectations of parents amongst others. Free and fair elections are underlined by the following Acts: Constitution of the Republic of South Africa, Act 108 of 1996; National Education Policy Act, Act 27 of 1996; South African Schools Act. Act 84 of 1996 all these together with applicable provincial laws. The election procedure should be aimed at: meeting statutory requirements of the relevant legislation; ensuring the broadest representation of identified stakeholders in school governance; advancing and promoting the fundamental rights of every person by eliminating the past inequality of access to involvement in school governance through making provision for those previously marginalized and conducting elections which are managed efficiently while being fair, democratic and transparent. When conducting the school elections, the principal shall be the school electoral officer or the senior manager of another school. In some cases, an educator or non-educator who has received Independent Electoral Commission (IEC) training as an electoral officer may serve as a school electoral officer of a school where he/she is not employed. The school electoral officer should prepare a notice giving details of the date, time and venue of the election meeting in time as stipulated in the provincial regulations; ensure that there is a suitable venue for the election meeting and ensure that the election team know what processes will be followed, and that all the resources that will be needed are available, such as the box for votes, a board to write names of nominees, paper for voting etc.

**Responsibilities of stakeholders in relation to SGB elections**

It is the responsibility of the school to have in place an electoral officer who is the principal or senior manager of another school and set up the school election team made up of the educators and non-educators employed at the school. The SASA allows parents and learners to participate in the school election team. The school should also prepare a voters` roll of all eligible voters in the school (according to different components of the SGB) and have it available at all election meetings. All eligible voters has to be notified in writing not less than 21 days before the date of the election meeting of the date, time and venue of the election meetings. On the other hand, it is the responsibility of the parents to familiarise themselves with the provincial SGB regulations and publicise the upcoming elections in their community (Malada, 2005). They also have to attend the election meeting and elect the most suitable candidates as SGB members and provide appropriate venues for the elections. It is the responsibility of the learners to participate in the Representative Council of Learners (RCL) elections and ensure effective communication between school and home.

**The SGB membership**

There are three constituents that make the SGB. There are the elected members, co-opted members and the principal by virtue of his/her official capacity. It is however important to give clarity in some of the concepts in this paper. When coming to elections of the SGB, a parent means parents of officially enrolled learners at the school and who are not employed at the school. A parent also means a biological parent or guardian of a learner or the person entitled to custody of a learner. A parent also means a person who undertakes to fulfil

obligations of a parent or guardian of a learner or a person legally entitled to custody of a learner. It then rests with the school electoral officers to endorse who is eligible to vote. This has to be done by looking into the admission register to conclude who are legible to vote. To avoid conflict of interest, a parent who is employed at the school may not represent parents on the governing body (Molepo & Mji, 2014). Parents have a majority stake in order to ensure … a greater voice (Dieltiens 2005: 9 - 10). Because of its historical past, South Africa has a majority of adults who are not educated. Mncube (2007: 129) for example lists some of the problems as "… the lack of clear demarcation between the roles of the teaching staff and those of the school governing body (SGB), lack of time, lack of confidence from some parents, … lack of training which results in lack of knowledge of the Act and roles and responsibilities …" It is the very adults, who as school governing body members are expected to be in charge of the schools.

This means that chairmanship of meetings is a role taken up by one of the parents with the principal serving as an *ex officio* member. Effectively the legislation was meant to enhance parental involvement and contribution to "… whole school development" (van Wyk 2004: 50). The South African Schools Act explains an educator as a person who teaches, educates, trains other persons or who provides professional educational services, including professional therapy and educational psychological service at an institution. This includes an educator employed by the school. "… a considerable proportion of teachers are not sufficiently qualified or trained and they lack the competences to either implement … policies capably or take part in the decision-making processes in the school (Swanepoel 2008: 42) Only learners from Grade 8 to Grade 12 who are elected members of the RCL can serve on the SGB. Leaners represent and are elected by learners. Their inclusion into the SGB is for them to bring to the governing body the thoughts and views of learners. They take information from the SGB meetings to the learners. In the case of learners with special educational needs, learners in the eighth grade or higher can be elected, if this is reasonably practicable. There are also the co-opted members. These are chosen based on their experience and skills (Heystek, 2004). The main aim of including them in the SGB is so that they can widen the experience of the governing body and so that it reflects the local community. This category may include business people and religious leaders in the community (Hyslop, 1989). The last category to join the SGB is any institutional staff members appointed according to the Public Service Act who is not an educator at the institution, including those employed by the school. They represent and are elected by the non-teaching staff (Karlsson, 2001). Their views are viewed to be important in the governance of the school. This may mean people like Administrative Assistants (AAs) and General Assistants (GAs). It has to be stated that the principal may not be the electoral officer or be involved in conducting elections in his/her own school. As an ex-officio member, the principal has an interest in the outcome of the elections and therefore his/her direct involvement in the elections of his/her school`s SGB

## Method

### Participants

The targeted population comprised of learners, educators, principals and parents who are SGB members from one APO of the North West province. The APO has 55 schools including primary, middle and high schools. This means that there were about 825 educators and approximately 330 SGB members. While the number of SGB members is for those still serving schools, in this study this number could be even more because past members were

also included. So as long as a person had been an SGB member they were then considered as eligible for the purpose of this study. To select participants, simple random sampling was used. The first aim was to select a sample of approximately 10% of the schools in the population. The 10% was seen to be an ideal number considering that the population of 55 schools would in essence have meant that there were 330 eligible participants. That number of participants would be difficult to reach. In selecting the 10% of the schools a table of random numbers was used and 6 schools were finally included in the study. Specifically, each school was given a number ranging from 1 to 55. The numbers were then defined in the Research randomizer (2011) which generated different sets, and set 2 was selected. In selecting the 6 schools, this meant that automatically the 6 principals were selected. In selecting teachers from each school, the researcher assigned numbers from 1 to *n* (where *n* was the number of teachers in a particular school) and the Research randomizer (2011) was used to select two. Four SGB members representing each school were also selected in a similar manner as the teachers. This means that the sample was made up of 54 participants, comprising 6 principals as well as 12 learners, 12 teachers and 24 SGB members. Participation by all individuals was voluntary because the purpose of the study was clearly explained to all possible participants. All questions and queries were addressed to their satisfaction. Examples of questions asked included (a) "... will you put my name in your report?" (b) "... Will you report what I say to the community?" and so on. Following this process, it was indicated to the participants that if they so wished they could decline to participate. Those who consented to participate were then requested to sign a consent form.

**Instrument and procedure**

Both qualitative and quantitative methods of collecting data were utilized in this study. In essence this was a mixed methods study. It is averred that the goal "…of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies ... " (Johnson, & Onwuegbuzie, 2004, pp. 14 - 15). In a similar vein, it has been pointed out that when the two methods are used in combination, the weakness of one could be balanced by the strength of the other (Breakwell & Millard, 1995). The aim of utilising both qualitative and quantitative methods here was to use these as some form of triangulating findings. This means that one method was used in some aspects of the study to verify and corroborate participants' assertions and views in the other method. A questionnaire comprising two sections was used to collect data. The first section requested the participants to provide biographical data in terms of age, gender, highest academic qualification and work experience. The second section determined the school stakeholder's perceptions on being elected as an SGB member in the Kgetleng River APO.

## Results

**Biographical data**

Participants were 54 learners, educators, principals and school governing body members. Table 1 shows the biographical data that the participants were requested to provide. It may be observed from the table that the majority of participants were women. Participants' ages ranged between 17 years and 55 years. The table further reveals that the majority (48%) of the participants had completed either a diploma or a degree and higher, the teaching experience ranged between 5 years and 21 years. With respect to SGB members, a majority (70%) had work experience of 6 years or more.

**Table 1 Biographical information of the participants (N = 54)**

| | Category | N | % |
|---|---|---|---|
| *Gender* | | | |
| | Women | 30 | 56 |
| | Men | 24 | 44 |
| *Age* | | | |
| | 17 – 19 | 12 | 22 |
| | 20 – 29 | 10 | 19 |
| | 30-39 | 13 | 34 |
| | 40 + | 19 | 35 |
| *Highest academic qualification* | | | |
| | Grade 8 | 10 | 19 |
| | Grade 12 | 18 | 33 |
| | Diploma (e.g. Diploma in primary education) | 20 | 37 |
| | Degree or higher(e.g. B.A. or B.A. Honours) | 06 | 11 |
| *Position held in school* | | | |
| | Learner | 12 | 22.22 |
| | Educator | 12 | 22.22 |
| | Principal | 06 | 11.11 |
| | School governing body member | 24 | 44.44 |
| *Teaching experience (Teachers)* | | | |
| | 5 – 9 | 3 | 25 |
| | 10 – 14 | 2 | 16.6 |
| | 15 - + | 7 | 58.3 |
| *Work experience (SGB Members)* | | | |
| | 1 – 5 | 18 | 75 |
| | 6 – 9 | 5 | 20.8 |
| | 10 + | 1 | 4.1 |

Deliberations on school stakeholder's perceptions on being elected as a School Governing Body (SGB) member

In establishing the reliability of the views on school stakeholder's perceptions on being elected as a School Governing Body member Cronbach's (1951) alpha as a measure of the internal consistency of scores obtained from the scale was computed. To establish the validity of the school stakeholder's perceptions on being elected as a School Governing Body member two processes were followed. Firstly, exploratory analysis was computed where the scale scores were subjected to a principal components analysis. Secondly, the internal consistency of scores from the questionnaire were determined and the value of alpha was found to be .75 [95% CI: $\alpha = .65$ - $\alpha = .83$]. This alpha value was adjudged to be fair since it is greater than .70 and less than .80 (Ciccheti, 1994). So participants' scores on the school

stakeholder's perceptions on being elected as a School Governing Body member were adjudged to be reliable.

Initially face validity was established by giving the school stakeholder's perceptions on being elected as an SGB member questions to three academics. The researchers explained to the academics what the questions were developed for. Following this the researchers then requested the three to provide expert opinion on any issue they observed about the questions. The first recommended input was about changing the researchers` questions from including the principal in the questions that were asked stating that they were not relevant to the principal.

**Table 2 Questions given to educators, learners and parents on their views on being chosen as SGB members (N = 54)**

| Being elected as an SGB member | Yes/No | Educator | learner | Parents |
|---|---|---|---|---|
| | | N (%) | | |
| 1. Knowledge on what being an SGB entails | Yes | 12 (100) | 4 (33.3) | 6 (25) |
| | No | 0 (0.0) | 8 (66.6) | 18 (75) |
| 2. I have experience as an SGB member | Yes | 7 (58.3) | 0 (0.0) | 15 (62.5) |
| | No | 5 (41.6) | 12(100) | 9 (37.5) |
| 3. My general knowledge will help me better my school | Yes | 12 (100) | 9 (75) | 24(100) |
| | No | 0 (0.0) | 3 (25) | 0 (0.0) |
| 4.I can bring about positive change as a member of the SGB | Yes | 12 (100) | 3 (25) | 10 (41.66) |
| | No | 0 (0.0) | 9 (75) | 14 (58.33) |
| 5. Will provide necessary skills required | Yes | 30 (100) | 8 (66.66) | 21 (87.5) |
| | No | 0 (0.0) | 4 (33.33) | 3 (12.5) |
| 6. I am prepared to attend workshops and improve my knowledge | Yes | 12 (100) | 12 (100) | 24 (100) |
| | No | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 7. I have a good relationship with my principal | Yes | 10 (83.3) | 7 (58.3) | 14 (58.3) |
| | No | 2 (16.6) | 5 (41.6) | 10 (41.6) |
| 8. Will you accept the principal`s authority | Yes | 12 (100) | 12 (100) | 24 (100) |
| | No | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 9. The principal understands education policies and I will not challenge his/her authority | Yes | 9 (75) | 12 (100) | 8 (33.3) |
| | No | 3 (25) | 0 (0.0) | 16 (66.6) |
| 10. The principal is not knowledgeable, the school is ours and what we say must go | Yes | 4 (33.3) | 6 (50) | 16 (66.6)) |
| | No | 8 (66.6) | 6 (50) | 8 (33.3) |
| 11. I now have power to | Yes | 10 (83.3) | 11(91.6) | 21 (87.5) |

| | | | | |
|---|---|---|---|---|
| influence the direction of my school | No | 2 (16.6) | 1 (8.3) | 3 (12.5) |
| 12. My position gives me power to sign cheques | Yes | 12 (100) | 12 (100) | 24 (100) |
| | No | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 13. I am very aware that there is no financial gains if one is an SGB member | Yes | 12 (100) | 12 (100) | 24 (100) |
| | No | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 14. I am prepared to work for no salary | Yes | 12 (100) | 12 (100) | 4 (16.6) |
| | No | 0 (0.0) | 0 (0.0) | 20 (83.3) |
| 15. My position as an SGB member will be like paying back to the community. I don't need monetary gains | Yes | 12 (100) | 12 (100) | 4 (16.6) |
| | No | 0 (0.0) | 0 (0.0) | 20 (83.3) |
| 16. Were you elected a member of the SGB because you wanted that position | Yes | 10 (83.3) | 10 (83.3) | 21 (87.5) |
| | No | 2(16.6) | 2 (16.6) | 3 (12.5) |

The academics then recommended that a five point scale be used as a tool to gather opinions of principals and their experience in SGB elections and how parent component respond or work as soon as they are elected into positions. A five point scale was then designed as follows: 5 = I don't know, 4 = Strongly Agree, 3 = Agree, 2 = Disagree and 1 = Strongly Disagree. In the original scale the researchers had divided the questions into four areas each with its heading. In doing this, the researchers thought that the questions were about (a) how stakeholders feel about being elected into the SGB, (b) stakeholders' knowledge about being an SGB matters, (c) expected relationship with the principal, and (d) how keen are stakeholders in being elected to be members of the SGB. Regarding the four areas the researchers were advised to remove these. The academics argued that if principal components analysis was to be conducted then the headings should be derived from resulting factors. Finally, the academics requested a change in a few item statements. After all this process, the academics certified that they were happy with the resultant scale. In this instance face validity of the scale was accepted. The questions were then set as below.

Table 3 Stakeholder perceptions on being elected into the SGB elections

| 1. | 2. | 3. | 4. | 5. |
|---|---|---|---|---|
| Strongly disagree | Disagree | I don't know | Agree | Strongly agree |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Parents are eager to be chosen as SGB members | 1 | 2 | 3 | 4 | 5 |
| 2. | Newly appointed SGB members are knowledgeable about what governance entails | 1 | 2 | 3 | 4 | 5 |
| 3. | Newly appointed SGB members are eager to learn about governance | 1 | 2 | 3 | 4 | 5 |
| 4. | Parents attend elections days in large numbers | 1 | 2 | 3 | 4 | 5 |
| 5. | Biological parents are always at the forefront of being chosen | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6. | Parents uses their membership to settle score with the principal | 1 | 2 | 3 | 4 | 5 |
| 7. | Any parent wanting to be elected to be a member can be elected, even if he/she does not have a child in that school | 1 | 2 | 3 | 4 | 5 |
| 8. | Learners are eager to be chosen as members of the RCL | 1 | 2 | 3 | 4 | 5 |
| 9. | Educators elected are the ones that are always on the principals` side | 1 | 2 | 3 | 4 | 5 |
| 10. | Learners chosen to join the SGB are always the ones that are well behaved | 1 | 2 | 3 | 4 | 5 |
| 11. | Parents elected stay in their positions for the duration of their term | 1 | 2 | 3 | 4 | 5 |
| 12 | Parents are willing to take a stand against other parents to support the principal. | 1 | 2 | 3 | 4 | 5 |

In responding to the questions on how eager parents were in being elected into the SGB, it became clear that all principals 6 (100%) were of a view that parents were not interested in being elected to be part of the SGB, they all strongly disagreed that parents were eager to be elected as SGB members. Principals were also in unison when they all strongly disagreed that newly appointed members were knowledgeable about what governance entailed. In corroborating this statement in an interview, one of the principals indicated that newly elected SGB members has a tendency of taking upon themselves duties that are for the SMT. " *…they do not know the difference between management and governance*" indicated one principal from a secondary school. This was supported by a principal from a primary school who indicated that "*…they even go to an extent of wanting to show educators how to teach the learners".* What also came up was that (100%) of principals strongly disagreed that parents attend election days in large numbers. Asked in interviews what the reason was for failure to turn up, the common reason put forward was that parents did not come for elections for the reason that they did not want to be elected. On the question of biological parents being at the forefront of being elected into the SGB the response was that 83% of the principals strongly disagreed with this. The reason for the response was that most of the parents of learners were not at home. Some were working in towns and not able to come to schools and others were just reluctant to do their parental duties. One very interesting response by principals was on the issue of parents using their membership in the SGB to settle their scores with the principal. 100% of responses indicated principals strongly agreed that parents used their membership to settle scores. Asked in the interview to give more clarity, principals indicated that since their villages were small, parents who were keen to be elected, did this with the aim of showing us that they have power. One principal indicated that some parents proudly said to other people in the village ("*…even if I am not educated I wield power in my school….without my signature on the cheque, the school can't work*".) on the issue of parental support from parents, 83% of principals indicated that parents under no circumstance were they willing to stand up for the principal as opposed to other parents. In the interviews principals said that *"… SGB parent components are afraid that other parents will see them as the principals' sycophants*" since parents feel that being a member of the SGB is something like being the opposition party in the school.

**Views on lack of knowledge in governance**

An inspection of the items from principal components analysis led the researchers into naming the factors in terms of membership into the SGB as: *lack of knowledge in governance*

(Factor 1, six items), *to be seen by my colleagues as the principal`s sycophant* (Factor 2, five items) and *working for no money* (Factor 3, five items). The analysis of the school stakeholder's perceptions on being elected as a School Governing Body (SGB) member, were based on the three established factors.

**Views on being seen by my colleagues as the principal`s sycophant**

Table 4 shows the measures of central tendency and the standard deviations of the items statement relating to views on being seen by my colleagues as the principal`s sycophant. The table shows that the responses were consistently clustering around a score of four. In all the five item statements, a majority of participants agreed or strongly agreed that they were not prepared to be seen as the principal`s sycophant.

Table 4. Measures of central tendency and standard deviations relating to the five items on the views on being seen by my colleagues as the principal`s sycophant

| | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 |
|---|---|---|---|---|---|
| No response | 5 | 5 | 5 | 5 | 5 |
| Mean | 3.85 | 3.70 | 3.83 | 4. 20 | 4.12 |
| Median | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Mode | 4 | 4 | 4 | 4 | 4 |
| SD | 1.26 | 1.25 | 1.25 | .99 | .92 |

The above table indicates that stakeholders are not eager to be elected into the SGB since they feel that if one is elected, he/she will be seen as the principal`s sycophant. This shows what conception do parents have in relation to being a member of the SGB. Most parents and stakeholders have a misconception that once one is elected into the office of the SGB one has to be what one can call a member of the opposition.

Figure 1 Percentage distributions of participants on an item about stakeholders not wanting to be members since they are not prepared to work for no money.

## Discussion

The results presented here have shown that the participants were relatively mature individuals most of whom (59 %) were 30 years or older. They were fairly not educated with 51% in possession of a grade 12 or lower qualification. The interviewees were asked, "Do you have any knowledge on what being an SGB entails?" Here the interviewees who were either educators or principals indicated that they were aware of what it meant to be SGB members. It is however interesting to notice that 75% of parents responded that they were not aware. In the first argument the parents indicated that they were not taught on what responsibilities of the SGB were and they were prepared to learn what was expected of them. The second interesting response was that 100% of parents were of the idea that they were going to use their general knowledge to better the school. On the other hand parents who want to join the SGB do so with the aim of settling scores with the principal (Molepo & Mji, 2014). Excerpts from the interviews illustrate this. For example Respondent 14 stated that: "…*the principal will know me this time…I will only sign cheques if I so feel and if not, I won't be signing any cheques".* Respondent 24 supported Respondent 14 sentiments by stating that: "…*this is our school, the principal can't dictate to us what he wants…the buildings are ours and the learners are our children… I strongly believe that we as parents have a greater say than the principals who is not even the child of the soil".* Similarly Respondent 6 stated "…*we have learned educators in our village, we can now as members of the SGB use our power to unseat the present principal and educators and choose educators and a principal from those who were born in this village*". On issue of the Parents elected stay in their positions for the duration of their term. Here a mixture of responses was received. Some indicated that they did not complete the three years because "… *I feel used by the principal, he calls us only when he want us to do things for him so that there will be minutes for the circuit manager ton see and think that the SGB is functional*". To contextualise her answer, Respondent 15 talked being used by the principal. In this regard she mentioned how the principal dictated in the meetings held by the SGB. She then intimated, "…*we are called to be told how far the school is, we do not actually decide as to where we want to take our school…it is the principal who decides, ours is just to rubber-stamp what he wants*". The different view that was put across was by Respondent 7 who stated that for parents not to complete their term of office was due to economic reasons. She said "…*as an SGB member we are not paid and our children need food on the table every day…I can't be attending meetings where I get no money …I rather use that time to do washing for neighbours who will in turn pay me for my efforts*". This research has shown that not everyone knows what exactly does SGB membership entails. Parents who have to be the front runners are still in the dark about what SGB membership is all about. We therefore recommend that the Department of Basic Education has to do much in educating parents on their responsibilities in the governance of the school. Parents meetings should be used as a platform to educate parents on school governance. If possible, let there be a stipend for members of the SGB.

## Limitations

It has to be stated that even if the sample of this study were randomly selected, the results presented here are in no way meant to be generalised to all schools in the North West province for instance. This is said since we are mindful of the fact that schools may be in the same province but conditions in those schools cannot be the same. It is worth pointing out that SGB elections are carried out differently in different provinces even if they are using common guidelines from the national guidelines hence this paper may not be seen as comprehensive in any way. Because of this, the researchers' aim was to illustrate how

complex is SGB elections in some parts of South Africa and it was therefore important that before embarking on such an endeavour all stake holders has to be educated on the importance of one being elected to be a member of the SGB.

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# VOCATIONAL TRAINING PROGRAMMES AND EMPLOYMENT CREATION FOR FORMER KHA RI GUDE LITERACY CAMPAIGN GRADUATES IN KHUJWANA VILLAGE, LIMPOPO

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**Abstract**
Vocational training is a broad concept usually defined as preparing people for jobs related to a specific trade, occupation or vocation. The South African government launched the *Kha Ri Gude* Mass Literacy Campaign in 2008 to enhance lifelong learning and create employment opportunities for marginalised adults. This paper seeks to explore the role of vocational training programmes in creating employment opportunities for women who are former graduates of *Kha Ri Gude* Literacy Campaign in Khujwana Village, Limpopo. The study is underpinned by the theories of empowerment and human capital and is qualitative in nature since this was conducted in a natural setting. The case study research design was employed and observations, individual and focus group interviews were used to collect data. Purposive sampling was used to select 10 women from *Kha Ri Gude* Literacy Campaign now involved in Vocational Training programmes. To analyse data, thematic content was used. The findings of the study affirmed that Vocational Training programmes have improved women's lives in various ways. It is concluded that vocational training has the potential to contribute to the improvement of participants' lives.

**Keywords:** employment creation, *Kha Ri Gude* Literacy Campaign, lifelong learning, livelihood, vocational training

## Introduction

Formal education is provided by primary, secondary and higher levels (Cohn & Geske, 1990). Conversely, informal education emanates from home and at work (Schultz, 1961). On-the-job training and apprenticeship (Mincer, 1974) and specialized vocational education can be obtained at secondary and higher levels (Corazzini, 1967). According to Charles and Muhammad (2014), vocational training has started to play an important role in accommodating non-formal training although it lacks the privilege of government policies. However, it has made contributions in terms of service delivery and entrepreneurship. There are myriad informal entrepreneurship establishments which exist by the roadside. For instance, there are women who are baking and selling fat cakes, women undertaking simple cooking from their homes to sell food, women sewing school and traditional clothes under the trees and other numerous areas of entrepreneurship.

The relevance of Vocational Education and Training for this study may be traced back to the introduction of the Adult Basic Education and Training (ABET) Policy 52 of 2000 in South Africa which has currently been repealed by the Continuing Education and Training Act 16 of 2006 . Both policies advocate for the recognition of formal, informal and non-formal education in an integrated education and training approach. In essence, the White Paper on Post School Education (2013) adds that communities learning needs such as community health care; parenting and childcare; early childhood development; care for the aged; care for

those with HIV/AIDS and other diseases; citizenship education; community organisation; making effective use of new consumer technologies for various purposes such as marketing local products; skills for self-employment in a range of areas, from market gardening to small-scale manufacture, arts and crafts are catered for to help unemployed adults in creation of employment opportunities.
The majority of women in South Africa live in rural areas where poverty and underdevelopment is the order of the day. Women in Khujwana, a village in Greater Tzaneen Municipality, Limpopo Province of South Africa are not an exception.

The Khujwana *Kha Ri Gude* Project was established to help former graduates and unemployed women to set up their own small businesses. The project aimed to break the cycle of poverty and promote participation of unemployed women towards the goals of socio-*economic* independence and social justice. However, women are still disadvantaged when compared to men in virtually all aspects of life. Sadly, women are still deprived of equal access to education, health care, capital, and decision making powers in the political, social, and business sectors. The South African education system is characterised by transformation in policy formulation.

Actions, activities and structures are aimed at empowering the society. Vocational education and training is undergoing radical changes in the 21st century. Women need to be empowered so as to utilise their vocational skills in relation to the changing environments. Such a move has the potential to empower participants with vocational education and training programmes to adapt to complex and changing work environments.

This study is theoretically underpinned by two theories, namely; empowerment theory and human capital theory. These theories are relevant to women's emancipation. The human capital theory was developed by among others Schultz (1961), Sakamota and Powers (1995) and Psacharoupoulos and Woodhall (1997). The theory relates closely with the empowerment theory in that it represents the investments people make in themselves for possibilities of enhancing their economic productivity (Olaniyan & Okemakinde, 2008). Notwithstanding the fact that this form of training has largely been left unplanned for, yet it plays an important role at preparing entrepreneurship for self-reliance. Women involved in vocational education and training programmes are able to feed and clothe their families. Apart from poverty alleviation and the dignity, vocational training programmes enabled renegotiation of gendered roles at home and in the community. Vocational Education and Training is known to increase productivity of individuals and expansion of national development (Agrawal, 2013). The author opines that a skilled community in a particular occupation has the potential to contribute to human capital required for the development of a country. This paper explored the role of vocational training programmes in creating employment opportunities for women who are former graduates of *Kha Ri Gude* Literacy Campaign in Khujwana Village, Limpopo.

The questions guiding the study are:

- In what vocational training programmes are *Kha Ri Gude* graduates in Khujwana Village, Limpopo involved?
- What is the relevance of *Kha Ri Gude* for former graduates involved in vocational training programmes?

- In what ways do vocational training programmes enable *Kha Ri Gude* former graduates in Khujwana Village, Limpopo create employment opportunities?

**Theoretical Framework**

As mentioned above, the study is anchored on the empowerment and human capital theories. The empowerment theory rests on the assumption that equipping individuals or groups of people with the relevant knowledge and skills enables them to play meaningful roles in the socio-economic development of their respective communities. Theorists have traditionally defined power as getting others to do what we want. Specifically, those in social sciences often emphasise power as influence or control. This view of power carried itself into the 1980s, when individuals realised that people are motivated much more by the idea that power can be shared, and thus empowerment was born. The theory postulates that empowerment is a multi-dimensional social process that helps people gain control over their own lives (Page & Czuba, 1999). Similarly, Chilisa (2012) refers to empowerment as a process that fosters power; that is, the capacity to implement in people, for use in their own lives, their communities, and in their society, by acting on issues that they define as important.

For this study, empowerment means to give women authority in order to enable them to gain power. As a collective, the mass literacy campaign enables women to take control of their lives and to participate fully in community decision making. The theory of empowerment is an important paradigm for community transformation (Mezirow, 2000). As applied to this study, the campaign has enabled adult learners to read, write and calculate in their mother tongue in line with the Unit Standards for Adult Basic Education and Training (ABET) Level One, and also to learn spoken English.

Therefore, Adult Basic Education undoubtedly contributes to women empowerment. It is against this background that the author advocates for the empowerment theory to enable women to utilise vocational education and training knowledge and skills to overcome obstacles and help them to develop their communities.

Conversely, human capital theory rests on several assumptions that education increases or improves the economic capabilities of people (Schultz, 1961). Olaniyan and Okemakinde (2008) support the view and argue that formal education is highly instrumental and necessary to improve the productive capacity of a population. Furthermore, education tends to affect control on population growth and to increase overall quality of life (Becker, 1993). This means education has the potential to increase the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability, which is a product of innate abilities and investment in human beings.

Human capital theory suggests that individuals and society derive economic benefits from investments in people (Schultz, 1971). In the spirit of finding alternative ways, Schultz (1961) reiterates further and postulates that the knowledge and skills that people acquire through education and training is a form of capital which is a product of deliberate investment that yields return. In the same vein, Becker (1993) confirms that human capital is a form of investment by individuals in education up to a point where the returns in extra income are equal to the costs of participating in education. In addition, Becker (1994) argues that human beings are important repositories of capital and schooling can raise earnings and productivity mainly by providing knowledge, skills and a way of analysing problems. It can

be concluded that the human capital theory regards an educated population as productive. As a way of contributing to economics, the human capital theory suggests that education and training are investments that make individuals genuinely more productive. The literature relating to human capital theory distinguishes among several types and means of education.

## Literature Review

### The relevance of *Kha Ri Gude* in vocational training programmes

The majority of women in South Africa live in rural areas where poverty and underdevelopment are severe and a low literacy rate among women is rife. Quan Baffour (2012, p. 239) affirms that in South Africa, millions of adults cannot read and write, not even in their home languages because they did not get the opportunity to attend formal education during childhood.

According to UNESCO Report (2012), reducing adult illiteracy into half by 2015 has been limited, largely because of government and donor indifference. In an attempt to close this gap the South African Constitution (Section 29:1) states that *everyone has the right to a basic education, including adult basic education*. In support of this endeavour, several literacy campaigns in South Africa have been ongoing throughout the years. In 1996, the Department of Education launched, the *Ithuteng Ready to Learn Campaign* as a pilot programme for the Adult Basic Education and Training (ABET) programme through which more than 90 000 adult learners were recruited. Four years later, the South African National Literacy Initiative (SANLI) was launched by the then Minister of Education, Kadar Asmal, in June 2000. SANLI worked in partnership with the University of South Africa (UNISA) ABET Institute to help address adult illiteracy. However, the challenge of low literacy levels remained. In 2006, the then Minister of Education in South Africa, Naledi Pandor established a Ministerial Committee on Literacy (MLC). As its starting point, the MCL developed a strategic plan for a mass literacy campaign to address the low literacy levels prevailing in the country. As a result, the South African government launched the *Kha Ri Gude* Literacy Campaign in February 2008. The purpose of the campaign is to emancipate and transform the teaching of adult learners, who cannot read and write. This study aimed to establish the extent to which vocational training programmes contributes to employment creation for women who are former graduates of the *Kha Ri Gude* Literacy Campaign in Khujwana Village, Limpopo.

It was hoped that women's participation in the *Kha Ri Gude* Literacy Campaign would enable them to acquire basic literacy and numeracy skills for enhancement of vocational training programmes. Consequently, this study reveals that women in Khujwana Village have established beadwork and sewing projects, vegetable farms and gardens, cooperatives and *stokvels f*or saving and investment.

### Vocational training

Vocational training is one of the most powerful instruments for enabling all members of the community to face new challenges and to find their roles as productive members of society. It is an effective tool for achieving social cohesion, integration and self-esteem. McGrath (2012) posits that vocational education and training is conventionally understood as encompassing the myriad forms of learning that are primarily aimed at supporting

participation in the world-of-work. Similarly, Hilal (2012) supports this definition and views vocational education and training as an important step towards employment, self-employment, entrepreneurship development, increasing productivity, providing the human capital for economic development and contributing to economic growth.

In an attempt to empower the unemployed human capital of the community for developing the country's workforce, the vocational education and training concept was revisited for all the people particularly unemployed women and their socio-economic needs. McGrath (2012) indicates that the area of vocational education and training is less certain and terminology has proliferated. For instance, one can find a range of terms including Vocational Education (VE) to refer to education in the vocations and Vocational Training (VT) which is a form of training relating to a vocation or an occupation.

An earlier definition by Blossfeld (1992) posits that vocational education and training equips students with skills which can enhance their productivity on the job. Lundberg's (1994) definition of vocational education and training looks at the ways the concept would be desirable in becoming more market responsive.

In contrast, Funnel (1996) describes vocational education and training as a field which players from diverse occupations have entered and changed by virtue of their experiences. For UNESCO (1997), vocational education and training refer to education and training as the acquisition of practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupations or trades.

## Methodology

A case study design employing qualitative research approach was followed, where participant's individual and focus group interviews and observations were employed. Purposive sampling was used to elicit the views of 10 women and former graduates from *Kha Ri Gude*, Khujwana Project, Limpopo. Data were collected through two primary data collection methods, namely; focus groups and individual interviews. Using more than one method of collecting data is supported by Savin – Baden and Howell Major (2013: 375) when they maintain that it is rare to find a qualitative study based on one method of data collection. Semi-structured interviews were used both in the focus groups and the individual interviews, which were conducted with women of the *Kha Ri Gude* Literacy Campaign. The interview was selected as it involves open-ended questions that are intended to elicit views and opinions from the participants (Creswell, 2014, p.190).

With the focus group interviews, the author was able to gather data from a limited number of individuals, who through a discussion among themselves, provided information about *Kha Ri Gude* Literacy Campaign in Khujwana Village relating to vocational training programmes and employment creation. Secondary data sources in the form of monthly meeting minutes of the project provided written information which was used to verify accuracy of data collected through interviews. Creswell (2014, p.201) points out the importance of triangulating different data sources of information by examining evidence from the sources. The focus groups interviews were conducted in the open air at Khujwana's gardening site while the individual interviews were conducted in the principal's office. In adhering to the

research ethics, the responses of the women, both in focus groups and individuals, were handwritten in a notebook, as audio recording was not agreed upon.

**Procedure**

Data were collected and analysed individually and collectively by four academics of the Adult Basic Education Department at UNISA who visited *Kha Ri Gude* Khujwana project on 21 to 23 September 2015. I transcribed the data by myself in an attempt to draw myself closer to the text and being able to make sense, interpret and theorise the data (Henning et al. 2013: 105). Using a variety of materials including the project' report, focus group interviews and field notes taken by the research team enabled me to engage with the data inductively, approaching the data from the particular to more general perspectives. After reading data from all participants, the transcriptions of all focus group interviews were divided into smaller and more meaningful units. The process enabled the researcher to group data together for interpretation and richness of description. Firstly, the researcher used transcriptions to compare participants' answers to each of the remaining questions. These transcriptions were elicited from the visit to *Kha Ri Gude* Khujwana Project in August 2015. Secondly, an open coding (i.e., generating as many themes as possible) was conducted through a line-by-line coding. Memos were also developed to trace issues and areas that were repetitive. Thirdly, I conducted a focused coding, where actions and events were summarized into themes—based on raw data, researcher notes and memos—to gain a better understanding of all the materials (Henning et al., 2013). Finally, based on the focused coding, the research team in consultation with one another created a codebook. The codebook was designed to investigate *Kha Ri Gude* graduates, Provincial *Kha Ri Gude* Coordinator and School Governing Body integrating literacy acquired in vocational training programmes, participation in vocational training programmes, structural aspects of the projects, and self-employment opportunities).

**Presentation of Results**

The presentations in this section are key findings from observatios, individual and focus group interviews with former *Kha Ri Gude* Literacy Campaign graduates in Khujwana Village, Limpopo involved in Vocational Training Programmes. The paper reveals the following results:

- Former *Kha Ri Gude* graduates are involved in various informal vocational training programmes.
- *Kha Ri Gude* Literacy Campaign enables former graduates to use skills acquired in the various vocational training programmes ventures.
- Vocational training programmes enable former graduates to create self-employment opportunities in Khujwana village.

**Discussion of findings**

One of the aims and objectives of the *Kha Ri Gude* Literacy Campaign is to empower socially disadvantaged people to become self-reliant and to uplift their living standards of poverty alleviation (UNESCO Institute for Lifelong Learning, 2009—2016). In an attempt to answer the research questions stated above, the author found out from the observations, individual and focus groups that women have been able to establish various vocational training programmes.

In response to the specific open-ended and probing questions during the focus group interviews, participants indicated that the programme empowered them to be able to volunteer their services at the local South Africa Police Services (SAPS) station and also helped the aged. Women attribute these opportunities to the education they received through *Kha Ri Gude* and the capacity building from UNISA confirming Shultz (1961) and Becker's (1993) human capital theory and Mezirow's (2000) community transformation confirming empowerment as a means to give women authority to enable them to gain power.

**Former *Kha Ri Gude* graduates are involved in various informal vocational training programmes.**

In response to the open-ended question posed regarding the impact of vocational training programmes in creating employment opportunities, they mentioned the involvement in various programmes including vegetable farms and gardens; formation of cooperatives; Moringa plantation; *stokvels* for saving and investment; and beadwork and sewing.

The following are taken from participants in the Moringa plantation project:

> *I love the Moringa plantation project so much. The project offers Moringa seedlings and education on nutrition at no cost to the rural communities in the province. At the beginning of the project we were offered 500 seedlings. Indeed, the Moringa plantation brought nutrition education and Moringa awareness to many people in the community.*

Another participant from the Moringa plantation project added:

> *Our Tribal Chief has offered a 25 hectare* [land for] *Moringa plantation. This will drastically increase our production and sales of Moringa leaf powder. The proceeds from the leaf powder sales will enable us to generate more income to support our families and child care initiatives in the community.*

Another shared her sentiments:

> *Our vegetable farm is doing well with the Moringa and chilli plantations and we are able to sell to our local community. Now that we can read and write, we want to be helped to acquire skills that will help us to do things for ourselves.*

In Sub-Saharan Africa, 31 percent of rural households are headed by women despite limitations in their access to resources and services (Palacios, Lopez & Kilic, 2015) Makiwane (2004) added that as roles are more gendered in South Africa, women are more likely to assume the nurturing role of taking care of children. This paper has established that rural women who were previously vulnerable have taken the decision to gain power through the *Kha Ri Gude* Literacy Campaign so as to make a difference in their families. This finding is consistent with Attwood, Castle and Smythe (2004) who also established that women in Southern Africa are increasingly taking over as breadwinners. This might be an indication that women, naturally are determined to take care of their families despite the hardships they experience. Additionally, the Chinese adage that says: "Give a (wo) man a fish you feed for a day but teach them how to fish you feed them for a lifetime", resonates with these findings.

Empowerment implies being imparted with skills leading to one being financially independent and being able to meet needs without someone else's assistance. The respondents gained relevant knowledge which they used immediately to take themselves out of poverty to living productive lives. All these five initiatives mentioned have some financial spin-offs and this is what government projects should be doing instead of promoting culture of hand-outs where people depend on government assistance or grants to survive.

***Kha Ri Gude* Literacy Campaign enables former graduates to use skills acquired in the various vocational training programme ventures.**

*Kha Ri Gude* Literacy Campaign has created critical awareness for lifelong learning which enables graduates who were previously illiterate to conduct their daily business with ease. A woman who has started a Spaza[5] shop commented that money counting challenges are eliminated because she applies the numeracy skills learnt at *Kha Ri Gude*. She further explained:

> *I can add or subtract money when customers come to buy bread and other food stuff. I thank Kha Ri Gude; I do not risk being cheated or having to pay more than I should when I buy groceries in stock.*

Similarly, Knowles, Holton and Swanson (2015) share the same view with the above participant that adult learners are self-directed. I understand the principle to mean that adults appreciated the need to be actively involved in the decisions that affected them, and as they matured, they become more capable of taking responsibility for themselves. However, Knowles et al. (2015) did not indicate that being self-directed meant being cut-off from others. I can deduce he recommended that the learning environment must be one of mutual respect and trust.

**Vocational training programmes enable former graduates to create employment opportunities in Khujwana village**

In another focus group interview, participants reported how they started an organic vegetable garden in the local primary school. This garden was meant for supporting orphans and vulnerable children in the community and people living with HIV/AIDS (PLWAs).
They stated:

> *We planted spinach, cabbages, onions and herbs such as Moringa, mint, lavender, parsley and other vegetables in the school yard. After consultations with the School Governing Body, we introduced the feeding scheme to feed learners from impoverished families.*

One of the participants from the vegetable farm cooperative exclaimed:

> *We work in a community farm and need our government to assist us with technical support as well as a new irrigation system and fixing the electricity at the farm. At*

[5] Spaza - an informal convenience shop business in South Africa, usually run from home. They also serve the purpose of supplementing household incomes of the owners, selling everyday small household items.

*the moment we produce quality produce to reputable stores. We want to move from supplying local markets to international markets and I think with the help of government we can achieve that goal.*

Another initiative which enables women to generate an income is *stokvels* which were explained as follows:

*We call ourselves Twelve Sisters. We contribute a standard amount every month and encourage members to have a long-term investment which is used for children's education or buying furniture.*

The second participant reiterated:

*I am thankful to Twelve Sisters; I have learnt to open an investment account in a banking institution. Since this formation, we are able to assist one another financially to cater for groceries at our family weddings or funerals.*

The above assertion highlighted the importance of adult education as documented by Nafukho, Amutabi, Otunga, (2005); UNESCO (2012); and Knowles (2015). On visiting the province of Limpopo in 2011, the former Minister for Women, Children and People with Disabilities, Minister Lulu Xingwana, shared the same sentiments of adults educating and supporting one another. She revealed that a growing number of independent black rural woman have made successful use of the farms they acquired through government's Land Reform Programme. She further explained that more support systems are needed to enable rural women to achieve productive and profitable farming.

According to Lukhele (1990) founder and president of the National *Stokvel* Association of South Africa (NASASA), *stokvels* are defined as a type of credit union in which a group of people enter into an agreement to contribute a fixed amount of money to a common pool weekly, fortnightly or monthly. To achieve development of rural women, we have to strengthen efforts that promote collaboration between communities, civil society, the three spheres of government and the private sector.

**Recommendations**

Literacy alone does not empower women to create and participate in change. The researcher opines that literacy, as part of policies and programmes that promote equality in all aspects of life and from a lifelong learning perspective can play a vital role in changing the lives of millions of women who have received little or no formal education.

A possibility to sustain *Kha Ri Gude* initiatives is to strive for promotion of income generation and project management skills through women cooperative activities so as to promote ownership of the projects by women in the communities; thus empowering them in major decision making of their projects. At the same time, there should be partnership formation with the private sector and Non-Governmental Organisations so that *Kha Ri Gude* graduates and women in general are given the essential skills to enable them create employment opportunities themselves and actively participating in the economy of the country**.**

## Conclusion

This paper explored the role of vocational training programmes in creating employment opportunities for women who are former graduates of *Kha Ri Gude* Literacy Campaign in Khujwana Village in Limpopo Province. The Human Capital and Empowerment theories were used in this paper. It was found that *Kha Ri Gude* Literacy Campaign has empowered its former graduates with reading and writing skills. This move enabled them to establish vocational training programmes for employment creation. The paper concludes that literacy education should be geared towards addressing the various needs of adults including employment creation. Such transformation will help address women's socio-economic needs and that of the broader society where skills are immediately used to turn around peoples' lives.

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# HUMAN RESOURCE MANAGEMENT PRACTICES AS PREDICTORS OF EMPLOYEE COMMITMENT OF ACADEMIC STAFF IN UNIVERSITIES IN UGANDA

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**Abstract**
The study sought to examine the extent to which ten human resource management (HRM) practices, namely recruitment, selection, job design, performance appraisal/ evaluation, training, promotion, employee participation/ involvement, rewards, job security and safety; and grievances handling mechanisms, were predictors of employment commitment (EC). The cross-sectional correlational study involved 301 respondents from seven universities in Uganda, from whom data were collected using a questionnaire whose validity and reliability were tested using Factor Analysis and Cronbach alpha. Means were used for descriptive analysis, while multiple regression was used for testing the hypotheses. Results showed that while recruitment, job design, training, job security and safety; and grievances handling mechanisms were predictors of EC, while selection, performance appraisal/ evaluation, promotion, employee participation/ involvement and rewards were not. This led to the conclusion that recruitment, job design, training, job security and safety; and grievances handling mechanisms were HRM practices necessary for the commitment of the academic staff to their jobs. Hence the recommendation that Management in the respective universities, implement those HRM practices in a manner that enhances EC.

**Keywords**: Academic staff, employee commitment, human resource management practices, regression, Uganda.

## 1. Introduction

Employees with high organisational commitment feelings affect organisational performance in positive ways because they lessen the frequency of performing negative behaviour and improve the quality of service (Yilmaz & Çokluk-Bökeoğlu, 2008). Employee commitment encourages the individual to exhibit organisational citizenship behaviour (OCB) that is to do many voluntary actions necessary for the organisation. Other authors propose that employee commitment reduces employee turnover (Lambert & Hogan, 2009). Employee commitment leads to acceptance of organisational change, explaining that when an organisation engages in change initiatives, committed employees provide many benefits such as putting in extra effort to ensure that the change succeeds (Visagie & Steyn, 2011).

Organisational commitment enhances knowledge sharing between employees, expounding that with knowledge sharing, information, skill or expertise are reciprocally exchanged among members of the organisation (Demirel & Goc, 2013). Knowledge sharing leads to creation of new ideas among the employees and presenting new business ideas fundamental to a living organisation. Owing to the importance of employee commitment, various studies (e.g. Bayona-Sáez, Goñi-Legaz & Madorrán-García, 2009; McCabe & Garavan, 2008; Smeenk, Teelken, Eisinga & Doorewaard, 2009; Suman & Srivastava, 2012; Wang, Indridason & Saunders, 2010) have been devoted to establishing its antecedents or determinants. However, as those studies suggest, there has been a bias of those studies

towards the West, thus excluding the developing world contexts. This paper accordingly reports on a survey on the employee commitment of academic staff in universities in Uganda carried out with the purpose of linking the commitment with the characteristics of the individual (academic staff in universities).

## 2. Theoretical Framework

The Social Exchange Theory (SET) suggests that human resource management (HRM) practices contribute to exchange relationships between employees and the employer. This positive exchange relationship is especially so when the employer considers the needs of individual workers to which employees reciprocate with favourable attitudes and behaviour (Marescaux, De Winne & Sels, 2013). Geetha and Mampilly (2012) explained that the basic principle with SET is that employees view satisfying HRM practices as an organisation's commitment towards them. Employees thus reciprocate this through positive behaviours like employee commitment. They are thus more likely to exchange their commitment for resources and benefits provided by their organisation. Basing on this theory, it is reasonable to suggest that HRM practices may lead to commitment of academic staff in universities. This paper therefore found it imperative to relate to HRM practices to employee commitment. Thus, the objectives of this study were to establish whether recruitment, selection, job design, performance appraisal/ evaluation, training, promotion, employee participation/ involvement, rewards, job security and safety; and grievances handling mechanisms were predictors of academic staff in universities.

## 3. Literature on the Predictors of Employee Commitment

*3.1* ***Recruitment:*** Several studies (e.g. Chew & Chan, 2008; Edwards & Billsberry, 2010; Gutierrez, Candela & Carver, 2012) related recruitment to employee commitment (EC). Chew and Chan (2008) studied human resource practices, organisational commitment and intention to stay using employees from higher education, public sector, health care and manufacturing in Australia as the units of analysis. They operationalised recruitment in terms of person-organisation fit, which referred to recruitment practices involving efforts to achieve higher levels of fit between newcomers and the organisation. Using correlation, they established that person-organisation fit positively affected EC. Edwards and Billsberry (2010) tested the multidimensional theory of person-environment fit in an online survey with staff of an organisation based at Syracuse University in New York.

They operationalised person-environment fit in terms of recruitment job preview constructs, namely person-organisation fit, person-people and person-job fit. Basing on regression analysis, they found out that all the three constructs positively significantly predicted EC. Gutierrez et al. (2012) examined the relationship between EC and person organisation fit in a survey of staff in nursing teaching schools in the USA. Using regression analysis, they showed that person-organisation fit positively predicted organisational commitment. However, as the above studies suggest, many earlier studies have been carried out in the context of the western world such as the Australia (e.g. Chew & Chan, 2008) and the United States of America (e.g. Edwards & Billsberry, 2010; Gutierrez et al., 2012). This contextual gap thus left room for this study in the universities in Uganda to investigate the hypothesis that:

H1: Recruitment was a predictor of EC of academic staff.

*3.2* ***Selection:*** Studies (e.g. De Cooman etal., 2009; Harold & Shiju, 2012; Obeidat, Masa'deh & Abdallah, 2014) demonstrated that selection positively related to EC. De Cooman et al. (2009) examined the relationship between employees' work values and their organisation's values (person-organisation fit) using fresh graduate Flemish teachers as units of analysis. Using regression analysis, they established that the higher the perceived match between own and organisational values at entry (selection), the more likely it was that someone stayed with the organisation (continuance commitment). Harold and Shiju (2012) studied the influence of HRM practices on commitment of college teachers in higher educational institutions in India. Basing on regression, their study revealed that the HRM practice of selection significantly positively influenced affective commitment. Obeidat et al. (2014) studied the relationship between human resources management practices and EC with staff of consultancy firms operating in Jordan as their sample. The results of their regression analysis showed that selection methods had significant influence on EC. However, many of the studies were done on the Western World (De Cooman et al. 2009) and Asia (Harold & Shiju, 2012; Obeidat et al., 2014). The above contextual gap made it necessary for this study in the context of universities in Uganda to seek to establish whether:

H2: Employee selection was a predictor of employee commitment of academic staff.

*3.3* ***Job Design:*** A number of studies that have tested the extent to which job design relates to employee commitment, EC (e.g. Angelis, Conti, Cooper & Gill, 2010; Boselie, 2010; Wang, Indridason & Saunders, 2010) can be cited. Angelis et al. (2010) sought to provide insights into the role specific work practices played in relation to EC using a sample of employees from assembling industries in the UK that were namely, machinery, appliances and electronics and motor vehicles. Their regression test results indicated a significant positive relationship between job rotation and EC. Boselie (2010) studied high performance work practices to establish their effect on EC in the healthcare sector with employees of a hospital in The Netherlands as the study sample. Using multivariate analysis, and in particular, regression, they established that task enrichment positively related to high affective commitment. Wang et al. (2010) carried out a study on affective and continuance commitment in public private partnership on employees of a UK National Health Service (NHS) hospital. In their findings based on regression analysis, they reported a significant positive relationship between transfer (which implied job rotation) and EC. However the cited studies suggest a skew of the studies towards the developed world such as the United Kingdom (e.g. Angelis et al., 2010; Wang et al., 2010) and the Netherlands (e.g. Boselie, 2010). This contextual gap called for this study in the context of universities in Uganda to investigate the hypothesis to the effect that:

H3: Job design was a predictor of employee commitment of the academic staff.

*3.4* ***Performance Appraisal/ Evaluation:*** Studies (e.g. Farndale, Hope-Hailey & Kelliher, 2011; Kuvaas, 2010; Morrow, 2011) offered insight on the relationship between performance appraisal and employee commitment (EC). In particular, Farndale et al. (2011) studied the role of justice and trust in high commitment performance management obtaining survey data from employees of four organisations in the UK that were in the finance, automotive, foodstuff and communications sectors. Via a correlation test, they established a strong relationship between appraisal procedural justice and EC. Kuvaas (2010) studied the interactive role of performance appraisal reactions and regular feedback in a cross sectional study on employees of a bank, government department and a pharmaceutical industry in

Norway. Using correlation analysis, they found out that perceived helpfulness of performance appraisal was positively related to affective EC. Morrow (2011) in a review of 58 studies reported a number of findings. In the first place, he reported that previous performance appraisals conducted one month previously had no subsequent impact on affective commitment among software development employees and prior performance ratings were unrelated to affective EC. However, some gaps still emerge at the contextual and methodological levels from such studies. At contextual level, the studies by Kuvaas (2010) and Farndale et al. (2011) were carried out in Norway and UK respectively, and at methodological level, the study by Morrow (2011) was a review of previous studies. The above gaps attracted this empirical study in the context of universities in Uganda to try to establish whether:

H4: Performance appraisal/ evaluation was a predictor of employee commitment of the academic staff.

*3.5* ***Training****:* Previous studies (e.g. Mohyin, Dainty & Carrillo, 2012; Savaneviciene & Stankeviciute, 2011; Truitt, 2011) related training and employee commitment. Mohyin et al. (2012) studied human resource management (HRM) strategies for managing EC with employees of small construction professional service firms in the UK providing the necessary data. Their results from multiple sources, namely interviews, observation and a summary account of the key issues from document analysis, showed that training was important in fostering EC. Savaneviciene and Stankeviciute (2011) analysed the linkage between HRM practices on one hand, and EC and job satisfaction of employees on the other, of a service sector organisation in Lithuania. Basing on correlation analysis, they found that skill-enhancing HRM practices had a positive relationship with affective commitment. Truitt (2011) examined the effect of training and development on employee attitude using the staff of a university in Maryland and business corporations in Delaware and Arizona, the USA as the units of analysis. Their correlation results suggested a significant positive relationship between one's positive training experiences and attitudes such as EC. All the above studies however, were carried out in the context of the Western World, namely the UK (Mohyin et al., 2012), the USA (Truitt, 2011) and Lithuania (Savaneviciene & Stankeviciute, 2011), which gap made it necessary for this study in the context of universities in Uganda to attempt to find out whether:

H5: Training was a predictor of employee commitment

*3.6* ***Promotion:*** Studies (e.g. Gunlu, Aksarayli & Percin, 2010; McCabe & Garavan, 2008; Scheible & Bastos, 2013) positively related promotion to employee commitment (EC). Gunlu et al. (2010) studied job satisfaction and organisational commitment of hotel managers in Turkey. Using bivariate and multivariate analyses, they established that employee development (promotion) had a significant effect on the normative and affective aspects of EC. McCabe and Garavan (2008) carried out a study on the drivers of EC among nursing staff from two National Health Service (NHS) organisations in the UK. Analysis of interview results using the constant comparative approach indicated that development (promotion) was among the factors that positively influenced EC. Scheible and Bastos (2013) studied the influence of HRM practices on EC of employees of an information technology company in Brazil. Using correlation analysis, they found a positive and highly significant correlation between promotion and EC. However, the studies above were carried out in the context of the Western World (e.g. Gunlu et al., 2010; McCabe & Garavan, 2008) and the Caribbean

(Scheible & Bastos, 2013). Besides they were carried out in the context of an information technology company (Scheible & Bastos, 2013), health service (McCabe & Garavan, 2008) and hotel industry (Gunlu et al., 2010). The above contextual gaps made it necessary for this study to seek to find out whether:

H6: Promotion was a predictor of EC of academic staff**.**

*3.7* ***Employee Participation/ Involvement:*** Studies correlating participation and employee commitment, EC (e.g. Angelis et al., 2010; Henkin & Holliman, 2008) are available. Angelis et al (2010) sought to provide insights into the role specific work practices played in relation to EC with employees from assembling industries in the UK. The assembly industries were namely, machinery, appliances and electronics and motor vehicles as the sample. In a regression analysis, they established that employee participation had a significant positive relationship with employee commitment. Henkin and Holliman (2008) found that participation was marginally related to EC, Angelis et al. (2010) established a significant positive relationship between participation with EC. However, the studies cited suggest a bias towards the developed world such as the United Kingdom (e.g. Angelis et al., 2010) and the United States (e.g. Henkin & Holliman, 2008). Hence, the need for this study in the context of universities in Uganda to test the hypothesis that:

H7: Employee participation/ involvement was a predictor of employee commitment of the academic staff.

*3.8* ***Rewards:*** Scholars (e.g. Gellatly, Hunter, Currie & Irving, 2009; Mohyin et al., 2012; Tornikoski, 2011) revealed the importance of rewards in promoting employee commitment, EC. Gellatly et al. (2009) in a study on HRM practices and EC profiles used employees of a variety of Canadian-based organisations as their study sample. Using regression, they established that reward-oriented HRM practices significantly increased the likelihood of devoted membership profile which refers to EC. Mohyin et al. (2012) in a qualitative study with employees of small construction professional service firms in the UK suggested that employees preferred monetary rewards over non-monetary rewards with fair and reasonable salary being the most important reason for employees to stay with the organisations. Even those employees, who received non-monetary rewards such as insurance and mobile phones, preferred and valued monetary rewards (specifically a fair and reasonable salary) more than any other non-monetary reward. Tornikoski (2011) analysed the role of the total reward package on fostering the affective commitment of the graduates of the Finnish Association of Business School working abroad at the time. Via correlation, they showed a significant positive relationship between the total reward package and EC. However, all the above studies were carried out in the Western World inclusive of Finland (Tornikoski, 2011); Canada (Gellatly et al., 2009); and the UK (Mohyin et al., 2012) suggest a bias of past studies in favour of the West. This gap made it incumbent for this study to establish whether in the context of universities in Uganda, the following hypothesis held:

H8: Rewards were a predictor of the employee commitment of the academic staff.

*3.9* ***Job Security and Safety:*** Previous studies (e.g. Bayona-Sáez etal., 2009; Chen, Myrtle, Liu & Fahey, 2011; Ünsal-Akbıyık, Çakmak-Otluoğlu & De Witte, 2012) related job security to employee commitment (EC)**.** Bayona-Sáez et al. (2009) studied how to raise the commitment of teachers at the Public University of Navarra in Spain. Using ordered logit models, they established that job security was not a significant antecedent. Chen et al. (2011)

studied job and career influences on the career commitment of health care executives of members of the American College of Healthcare Executives (ACHE) as units of analysis. Their correlation results showed that job security had a statistically significant positive association with career commitment. Ünsal-Akbıyık et al. (2012) carried out a study on job insecurity and affective commitment of workers in tourism sector in Turkey. Using multivariate analysis of variance (MANOVA) and regression, they found that seasonal workers were affectively less committed to their organisations than permanent workers were. However, controversies emerge from the above studies which present a research gap. Whereas, the studies by Chen et al. (2011) and Ünsal-Akbıyık et al., (2012) indicated positive significant association between job security and employee commitment, Bayona-Sáez et al. (2009) found an insignificant association. These controversial findings suggested that there was still the need to test the hypothesis to the effect that:

H9: Job security and safety were a predictor of the employee commitment of the academic staff.

*3.10* ***Grievance Handling Mechanisms:*** Researchers (e.g. Harney & Jordan, 2008; Harold & Shiju, 2012) related grievance handling and employee commitment (EC). In their study, Harney and Jordan (2008) sought to establish whether line managers could stimulate improvements in firm performance by eliciting appropriate employee outcomes. Using the staff of a call centre in the UK as their units of analysis, through in-depth interviews they established that grievances handling by team leaders promoted EC. Employees viewed team leaders as defending their needs as the team leader initiatives were considered not to be constrained by leadership control. Harold and Shiju (2012) in a study on the influence of HRM practices on the EC of the faculty in higher educational institutions used teachers in colleges in India as their respondents. Via regression analysis, they found out that grievance handling significantly positively correlated with the affective, continuance and normative aspects of EC. The above positive results notwithstanding, the contextual gap is apparent. This called for this study to test whether:

H10: Grievance handling mechanisms were a predictor of the employee commitment of the academic staff in universities in Uganda.

## 4. Methodology

***4.1 Instrument:*** Using the quantitative approach, in particular the survey design, data were collected using a self-administered questionnaire (SAQ) - appended. The SAQ comprised three sections, namely A through C. Section A was on the background characteristics of the respondents with questions on the respondent's university, and its owner, position on first appointment in the university, current appointment in the university, terms of employment, age group, sex, highest level of education, tenure of service, and position in the hierarchy of the university. Sections B and C were on the dependent and independent variables (DV and IVs) respectively, and were developed basing on instruments already used by other scholars (see Table 1) basing on the premise that their validities and reliabilities could be taken for granted initially. However, still after data collection, the respective items were subjected to confirmatory factor and Cronbach analyses to reconfirm validity and reliability.

**Table 1** Variables in the Instrument, their Constructs, Number of Items, reliabilities and Sources

| Variable | Construct | Number of items adapted | Source of instrument, number of items and reliability (α) |
|---|---|---|---|
| EC | Affective | 7 | Allen & Meyer, 1990 (AC: n = 8; α = 0.87; CC: n = 8; α = 0.75; NC: n = 8; α = 0.79) |
| | Continuance | 5 | |
| | Normative | 7 | |
| HRM practices | Recruitment | 4 | Demo et al. 2012 (n = 6; α = 0.84) |
| | Selection | 2 | Chen & Huang, 2009 (n = 3, α = 0.815) |
| | | 2 | Wan, Ong & Kok, 2002 (n = 7; α = 0.8324) |
| | Job design | 5 | Dwivedula & Bredillet, 2009 (n = 18, α = 0.85) |
| | Performance appraisal/ evaluation | 3 | Chen & Huang, 2009 (n = 3, α = 0.903) |
| | | 3 | Demo et al. 2012 (n = 5; α = 0.86) |
| | Training | 4 | Wan et al. 2002 (n = 7; α = 0.8324) |
| | | 3 | Demo et al. 2012 (n = 6; α = 0.88) |
| | Promotion | 5 | Negash, Zewude & Megersa, 2014 (n = 6; α = 0.77) |
| | Employee participation/ involvement | 2 | Chen & Huang, 2009 (n = 3, α = 0.762) |
| | | 5 | Demo et al. 2012 (n = 12; α = 0.93) |
| | Rewards | 3 | Oldham, Kulik, Stepina & Ambrose, 1986 (n = 10; α = 0.70) |
| | | 3 | Demo et al. 2012 (n = 5; α = 0.81) |
| | Job security and safety | 3 | Oldham et al., 1986 (n = 10; α = 0.87) |
| | | 2 | Demo et al. 2012 (n = 6; α = 0.84) |
| | Grievance handling mechanisms | 5 | Zulkiflee, Faizal, Shakizah& Durrishah, 2010 (n = 11; α = 0.827 - 0.926). |

***4.2 Sample:*** Using the self administered questionnaire (SAQ), data were collected from 301 respondents from four public and three private chartered universities. The sample size was attained using two-stage sampling whereby in the first stage, the universities were clustered according to regions, Central, East, North and West. In stage two, the universities were stratified according to ownership that is public and private chartered. In the Central Region, Kyambogo University represented the public universities, while Kampala International and Ndejje represented the private chartered ones. From the Eastern Region, the universities chosen were Busitema, the only public university therein, and Islamic University in Uganda (IUIU) the only private chartered one in the region. From the Northern and Western Regions, Gulu and Mbarara University of Science and Technology (MUST) were selected, they being the only public universities in the regions, and no private university was chosen there from since the two regions by the time of sampling had no private chartered universities.

*4.3* ***Data Management:*** The data analysis was done at two levels, namely univariate and multivariate levels. The data analysis at univariate level was based on percentages from the frequency tables and descriptive statistics, specifically the mean. The multi-item constructs were subjected to confirmatory factor and Cronbach analyses to reconfirm validity and reliability. At the multivariate level, a predictive model was built by regressing the numerical index on the dependent variable (DV) on the numerical indexes of the four respective

independent variables (IVs). The Statistical Package for Social Sciences (SPSS) facilitated the data analysis.

## 5. Findings

*5.1* ***Background Characteristics of the Respondents:*** The data on background characteristics of the respondents of the study in Table 2 show that a typical respondent was a staff of Islamic University in Uganda, IUIU (26.2%); from a private university (57.5%); first appointed in the current university as a Teaching Assistant/ Assistant Lecturer (50.5%); currently serving as a Lecturer (51.5%); on permanent contract terms (43.5%). The typical respondent was aged 30 but below 40 years (50.5%); a male (61.5%); holding a masters degree (61.0%) as the highest qualification; married (78.7%); having served between five and 10 years in the current university (45.2%); and strictly an academic staff (79.2%).

**Table 2** Respondents Background Characteristics

| Item | Categories | Frequency | Percent |
|---|---|---|---|
| Name of the University a respondent worked in | Busitema University | 25 | 8.3 |
| | Gulu University | 33 | 11.0 |
| | Islamic University in Uganda | 79 | 26.2 |
| | Kampala International University | 67 | 22.3 |
| | Kyambogo University | 39 | 13.0 |
| | Mbarara University | 31 | 10.3 |
| | Ndejje University | 27 | 9.0 |
| | Total | 301 | 100.0 |
| Ownership of the University the respondent worked in | Public | 128 | 42.5 |
| | Private | 173 | 57.5 |
| | Total | 301 | 100.0 |
| Position of the respondent on first appointment to the current University | Teaching Assistant/ Assistant Lecturer | 152 | 50.5 |
| | Lecturer | 134 | 44.5 |
| | Senior Lecturer | 13 | 4.3 |
| | Associate Professor | 02 | 0.7 |
| | Professor | 00 | 0.0 |
| | Total | 301 | 100.0 |
| Current appointment of the respondent in the current University | Teaching Assistant/ Assistant Lecturer | 100 | 33.2 |
| | Lecturer | 155 | 51.5 |
| | Senior Lecturer | 40 | 13.3 |
| | Associate Professor | 03 | 1.0 |
| | Professor | 03 | 1.0 |
| | Total | 301 | 100.0 |
| Terms of employment of the respondent in the current University | Permanent | 131 | 43.5 |
| | Probation | 17 | 5.6 |
| | Contract | 129 | 42.9 |
| | Part-time | 24 | 8.0 |
| | Total | 301 | 100.0 |
| Age group of the respondent in years | Up to 30 years | 61 | 20.3 |
| | 30 but below 40 | 152 | 50.5 |
| | 40 and above | 88 | 29.2 |
| | Total | 301 | 100.0 |
| Sex of the respondent | Male | 182 | 61.5 |
| | Female | 114 | 38.5 |
| | Total | 296 | 100.0 |

| | | | |
|---|---|---|---|
| Highest level of education attained by the respondent | Bachelor's degree | 33 | 11.0 |
| | Post graduate diploma | 14 | 4.7 |
| | Master's degree | 183 | 61.0 |
| | PhD degree | 70 | 23.3 |
| | Total | 300 | 100.0 |
| Marital status of the respondent | Single never married | 49 | 16.3 |
| | Married | 237 | 78.7 |
| | Widowed | 9 | 3.0 |
| | Divorced | 6 | 2.0 |
| | Total | 301 | 100.0 |
| Tenure in years of employment attained by the respondent in the current University | Up to one | 26 | 8.6 |
| | One but below five | 93 | 30.9 |
| | Five but below 10 | 136 | 45.2 |
| | 10 and above | 46 | 15.3 |
| | Total | 301 | 100.0 |
| Position of the respondent in the hierarchy of current University | Administrative position (e.g. Principal of a college, Dean of a faculty, Head of institute, Head of dept) | 62 | 20.8 |
| | Strictly academic | 236 | 79.2 |
| | Total | 298 | 100.0 |

*5.2* ***Means, Factors and Cronbach Alphas:*** Tables 3 presents the study items for the three aspects (affective commitment, AC; continuance commitment, CC; and normative commitment, NC) of the dependent variable in the study (employee commitment, EC). Their respective means, factor loadings and Cronbach alphas are given, as measures of central tendency, validity and reliability respectively. The means on the respective items in Table 3 suggest that the respondents rated themselves highest on AC (overall mean = 3.76), followed by NC (overall mean = 3.26) and worst on CC (overall mean = 3.06). As the factor loadings suggest, all respective items loaded highly - that is above 0.5 (Foster, 1998), implying that the respective items were proper measures of the corresponding constructs of EC. Regarding reliability, all three Cronbach alphas exceeded the benchmark 0.7 for Confirmatory Reliability Analysis (Hair, Anderson, Tathan & Black, 1998). Thus all the three constructs of EC used in the study were considered reliable.

**Table 3** Means, Factors and Cronbach Alphas for Components of Employee Commitment

| a) AC | Mean | Overall Mean | Factor on AC | Cronbach (α) |
|---|---|---|---|---|
| AC1 | 4.06 | 3.76 | 0.768 | 0.910 |
| AC2 | 3.78 | | 0.776 | |
| AC3 | 3.45 | | 0.739 | |
| AC4 | 3.76 | | 0.859 | |
| AC5 | 3.77 | | 0.817 | |
| AC6 | 3.69 | | 0.856 | |
| AC7 | 3.79 | | 0.836 | |
| Eigenvalue | | | 4.575 | |
| % variance | | | 65.360 | |
| b) CC | Mean | Overall Mean | Factor on CC | Cronbach (α) |
| CC1 | 3.00 | 3.06 | 0.761 | 0.850 |
| CC2 | 2.92 | | 0.853 | |
| CC3 | 3.00 | | 0.907 | |
| CC4 | 2.93 | | 0.882 | |

| | | | | |
|---|---|---|---|---|
| CC5 | 3.46 | | 0.530 | |
| Eigenvalue | | | 3.188 | |
| % variance | | | 63.763 | |
| c) NC | Mean | Overall Mean | Factor on NC | Cronbach (α) |
| NC1 | 2.90 | 3.26 | 0.530 | 0.745 |
| NC2 | 3.92 | | 0.697 | |
| NC3 | 3.16 | | 0.748 | |
| NC4 | 3.77 | | 0.670 | |
| NC5 | 2.78 | | 0.676 | |
| NC6 | 3.06 | | 0.665 | |
| Eigenvalue | | | 2.674 | |
| % variance | | | 44.567 | |

AC = Continuance Commitment, CC = Continuance Commitment, NC = Continuance Commitment

Table 4 presents the study items for the independent variables (IVs) in the study, with their means, factor loadings and Cronbach alphas, as measures of central tendency, validity and reliability respectively. The means on the respective items in Table 4 suggest that the respondents rated themselves highly on recruitment (Rec), selection (Sel), and job design (Jdes) (overall means ≈ 4); and fairly on performance appraisal/ evaluation (PAE), training (Train), promotion (Promo), employee participation/ involvement (EPI), Rewards (Rew), job security and safety (JSS) and grievances handling mechanisms (GHM) (overall mean ≈ 3). As factor loadings suggest, all respective items loaded highly - that is above 0.5 (Foster, 1998), implying that the respective items were proper measures of the corresponding constructs. However unlike all other constructs, the training construct (Train) in Table 4 (e) had two components extracted from it, with the first having an eigenvalue of 3.725 against 1.019 for the second.

The first component explained over 53% of variance in the construct while the second explained only less than 15%. Also while the first component loaded highly on all items of Train, the second component highly loaded only on Train2 (-0.503), and Train6 (0.504). Moore and Benbasat (1991, p. 207) refer to such items as these two loading highly on more than one factor, as “complex” and advises that they be dropped from analysis due to that “complexity”. Thus only the remaining five items Train1, Train3 - 5, Train7 were considered valid measures. Then Cronbach alpha originally 0.853, which was high since it exceeded 0.7 (Hair etal, 1998), was recomputed yielding 0.801, meaning that dropping items made the measure more valid but less reliable. Regarding reliability, all Cronbach alphas for all the IVs exceeded the benchmark 0.7 for Confirmatory Reliability Analysis (Hair et al., 1998). Thus all constructs used for the respective IVs in the study were considered reliable.

**Table 4** Means, Factors and Cronbach Alphas for the Human Resource Management Practices

| a) Rec | Mean | Overall Mean | Factor on Rec | Cronbach (α) |
|---|---|---|---|---|
| Rec 1 | 3.81 | 3.88 | 0.661 | 0.722 |
| Rec 2 | 3.54 | | 0.693 | |
| Rec 3 | 4.58 | | 0.509 | |
| Rec 4 | 3.72 | | 0.794 | |
| Rec 5 | 3.73 | | 0.779 | |

| | | | | |
|---|---|---|---|---|
| Eigenvalue | | | 2.414 | |
| % variance | | | 48.274 | |
| b) Sel | Mean | Overall Mean | Factor on Sel | Cronbach (α) |
| Sel 1 | 4.10 | 4.05 | 0.815 | 0.740 |
| Sel 2 | 3.86 | | 0.817 | |
| Sel 3 | 4.27 | | 0.696 | |
| Sel 4 | 4.00 | | 0.675 | |
| Eigenvalue | | | 2.272 | |
| % variance | | | 56.794 | |
| c) Jdes | Mean | Overall Mean | Factor on Jdes | Cronbach (α) |
| Jdes 1 | 4.49 | 3.70 | 0.539 | 0.753 |
| Jdes 2 | 3.72 | | 0.817 | |
| Jdes 3 | 3.40 | | 0.808 | |
| Jdes 4 | 4.05 | | 0.883 | |
| Jdes 5 | 2.86 | | 0.505 | |
| Eigenvalue | | | 2.647 | |
| % variance | | | 52.941 | |
| d) PAE | Mean | Overall Mean | Factor on OR | Cronbach (α) |
| PAE 1 | 3.10 | 2.81 | 0.697 | 0.894 |
| PAE 2 | 3.05 | | 0.835 | |
| PAE 3 | 2.85 | | 0.856 | |
| PAE 4 | 2.29 | | 0.753 | |
| PAE 5 | 2.76 | | 0.836 | |
| PAE 6 | 2.85 | | 0.879 | |
| Eigenvalue | | | 3.955 | |
| % variance | | | 65.909 | |

| e) Train | Mean | Overall Mean | Factors on Train | | Cronbach (α) |
|---|---|---|---|---|---|
| | | | 1 | 2 | |
| Train 1 | 3.16 | 3.21 | 0.732 | -0.455 | 0.853 (Before dropping Train2 & Train6) |
| Train 2 (Dropped) | 2.78 | | 0.744 | -0.503 | |
| Train 3 | 2.87 | | 0.733 | -0.074 | 0.801(After dropping Train2 & Train6) |
| Train 4 | 3.09 | | 0.785 | -0.146 | |
| Train 5 | 3.63 | | 0.702 | 0.380 | |
| Train 6 (Dropped) | 3.42 | | 0.690 | 0.504 | |
| Train 7 | 3.55 | | 0.716 | 0.365 | |
| Eigenvalue | | | 3.725 | 1.019 | |
| % variance | | | 53.209 | 14.556 | |

| f) Promo | Mean | Overall Mean | Factor on Promo | Cronbach (α) |
|---|---|---|---|---|
| Promo 1 | 3.37 | 3.16 | 0.834 | 0.874 |
| Promo 2 | 2.95 | | 0.832 | |
| Promo 3 | 3.21 | | 0.762 | |
| Promo 4 | 3.22 | | 0.851 | |
| Promo 5 | 3.05 | | 0.800 | |
| Eigenvalue | | | 3.333 | |
| % variance | | | 66.651 | |
| g) EPI | Mean | Overall Mean | Factor on EPI | Cronbach (α) |
| EPI 1 | 2.61 | 2.86 | 0.804 | 0.907 |

| | | | | |
|---|---|---|---|---|
| EPI 2 | 2.83 | | 0.841 | |
| EPI 3 | 2.83 | | 0.831 | |
| EPI 4 | 2.76 | | 0.871 | |
| EPI 5 | 2.82 | | 0.733 | |
| EPI 6 | 2.84 | | 0.851 | |
| EPI 7 | 3.34 | | 0.670 | |
| Eigenvalue | | | 4.515 | |
| % variance | | | 64.494 | |
| h) Rew | Mean | Overall Mean | Factor on Rew | Cronbach (α) |
| Rew 1 | 2.90 | 2.67 | 0.756 | 0.901 |
| Rew 2 | 2.54 | | 0.888 | |
| Rew 3 | 2.56 | | 0.868 | |
| Rew 4 | 2.41 | | 0.882 | |
| Rew 5 | 2.55 | | 0.877 | |
| Rew 6 | 3.11 | | 0.654 | |
| Eigenvalue | | | 4.089 | |
| % variance | | | 68.145 | |
| i) JSS | Mean | Overall Mean | Factor on JSS | Cronbach (α) |
| JSS 1 | 3.48 | 3.45 | 0.746 | 0.801 |
| JSS 2 | 3.39 | | 0.742 | |
| JSS 3 | 3.67 | | 0.831 | |
| JSS4 | 3.44 | | 0.638 | |
| JSS5 | 3.27 | | 0.787 | |
| JSS 6 | 3.48 | | 0.746 | |
| Eigenvalue | | | 2.822 | |
| % variance | | | 56.440 | |
| j) GHM | Mean | Overall Mean | Factor on GHM | Cronbach (α) |
| GHM1 | 3.21 | 3.05 | 0.769 | 0.864 |
| GHM 2 | 3.01 | | 0.882 | |
| GHM 3 | 2.70 | | 0.815 | |
| GHM 4 | 2.91 | | 0.850 | |
| GHM 5 | 3.42 | | 0.716 | |
| Eigenvalue | | | 3.269 | |
| % variance | | | 65.390 | |

Rec = Recruitment; Sel = Selection; Jdes = Job design; PAE = Performance appraisal/ evaluation; Train = Training; Promo = Promotion; EPI = Employee participation/ involvement; Rew = Rewards; JSS = Job security and safety; and GHM = Grievances handling mechanisms.

***5.3 Statistical Model for Predicting Employee Commitment using the Human Resource Management Practices:*** To establish whether the human resource management practices (HRM) practices predicted the employee commitment of the academic staff in universities, the dependent variable namely, employee commitment was regressed on the independent variables (HRM practices), and the pertinent results are in Table 4.

**Table 5** Regression of Employee Commitment on Human Resource Management Practices

| HRM Practice | Standardised coefficient β | Significance p |
|---|---|---|
| Recruitment | 0.116 | 0.035 |
| Selection | 0.084 | 0.092 |
| Job design | 0.088 | 0.046 |
| Performance Appraisal/ Evaluation | 0.084 | 0.202 |

| | | |
|---|---|---|
| Training | 0.140 | 0.024 |
| Promotion | -0.068 | 0.314 |
| Employee Participation/ Involvement | -0.027 | 0.687 |
| Rewards | 0.047 | 0.468 |
| Job Security and Safety | 0.338 | 0.000 |
| Grievances handling Mechanisms | 0.194 | 0.004 |

Adjusted $R^2$ = 0.491
F = 28.179, p = 0.000

The results in Table 4 show that, the 10 HRM practices explained 49.1% of the variation in employee commitment (adjusted $R^2$ = 0.491). This meant that the regression model was good/ significant (F = 28.179, p = 0.000 < 0.05). However, out of the 10 HRM practices only five namely; recruitment (β = 0.116, p = 0.035), job design (β = 0.088, p = 0.046), training (β = 0.140, p = 0.024), job security and safety (β = 0.338, p = 0.000) and grievances handling mechanisms (β = 0.194, p = 0.004) significantly predicted employee commitment. The remaining five HRM practices namely; selection, performance appraisal/ evaluation, promotion, employee participation/ involvement and rewards did not significantly predict employee commitment. Further, job security and safety (p = 0.000) most significantly predicted employee commitment followed by grievances handling mechanisms (p = 0.004), training (p = 0.024), recruitment (p = 0.035) and job design (p = 0.046) respectively, with increasing values of their significance or p values.

## 6. Discussion

The study revealed that a number of HRM practices namely; recruitment, job design, training, job security and safety; and grievances handling mechanisms significantly predicted employee commitment of academic staff in universities. Selection, performance appraisal/ evaluation, promotion, employee participation/ involvement and rewards/ remuneration did significantly predict employee commitment. Therefore Hypothesis One (H1) to the effect that recruitment was an antecedent of employee commitment was accepted. This finding concurred with the findings of other studies (e.g. Chew & Chan, 2008; Edwards & Billsberry, 2010; Gutierrez et al., 2012). However, Hypothesis Two (H2) the effect that selection was an antecedent of employee commitment was not accepted. This finding was at variance with the findings of other scholars (e.g. De Cooman et al., 2009; Harold & Shiju, 2012; Obeidat et al. (2014). In other words our finding with respect to the hypothesis was controversial.

Hypothesis Three (H3) suggesting that job design was an antecedent of employee commitment was also confirmed. This agreed with findings by other scholars (e.g. Angelis et al., 2010; Boselie, 2010; Wang et al., 2010). The study rejected Hypothesis Four (H4) proposing that performance appraisal was an antecedent of employee commitment. While this finding concurred with the finding by Morrow (2011), it was inconsistent with the findings by Farndale et al. (2011) and Kuvaas (2010). In other words our finding with respect to the hypothesis added to the controversy of whether job design is a predictor of employee commitment. In agreement with Hypothesis Five (H5), the study indicated that training was a predictor of employee commitment. This concurred with several earlier studies (e.g. Mohyin et al., 2012; Savaneviciene & Stankeviciute, 2011; Truitt, 2011). However, our study rejected the sixth hypothesis (H6) suggesting that employee promotion was an antecedent of employee commitment. This finding was contrary to findings by Gunlu et al. (2010); McCabe

and Garavan (2008); and Scheible and Bastos (2013), thus adding more food for thought for future researchers to establish whether promotion was a predictor of employee commitment.

Similarly, the study rejected Hypothesis Seven (H7) that employee participation/ involvement was a predictor of employee commitment. This finding of ours was the converse of the findings by past studies such as Angelis et al (2010). Thus a question for future researchers is: Is employee participation/ involvement in decision making a predictor of employee commitment? Hypothesis Eight (H8) to the effect that rewards were a predictor of employee commitment was rejected. This finding was controversial in that it was inconsistent with the findings of several earlier studies (e.g. Gellatly et al., 2009; Mohyin et al., 2012; Tornikoski, 2011). However, Hypothesis Nine (H9) suggesting that job security and safety was/ were a predictor of employee commitment was accepted. This finding agreed with the findings of Chen et al. (2011) and Ünsal-Akbıyık et al., 2012). The study also upheld Hypothesis 10 (H10) proposing that grievance handling mechanisms were a predictor of employee commitment. This finding concurred with the findings of several earlier studies (e.g. Harney & Jordan, 2008; Harold & Shiju, 2012). Basing on the significant positive predictors of employee commitment, it is therefore recommended that relevant stakeholders such as the directorates of human resource in the respective private universities implement recruitment, job design, training, job security and safety; and grievances handling mechanisms in a manner that enhance the employee commitment of the academic staff.

## 7. Conclusion

***7.1 Summary:*** This paper has reported on a survey of the academic staff in public and private universities in Uganda carried out with the purpose linking employee commitment with 10 HRM practices namely; namely recruitment, selection, job design, performance appraisal/ evaluation, training, promotion, employee participation/ involvement, rewards, job security and safety; and grievances handling mechanisms. In this endeavour the study closed gaps such as study was carried out in the context of universities in the developing world context that had hitherto generally been ignored by earlier studies.

***7.2 Implications:*** The findings of this study have practical significance to human resource directorates in universities in Uganda and other similar institutions of higher learning. Specifically, the findings to the effect that recruitment, job design, training, job security and safety; and grievances handling mechanisms were significant positive predictors of employee commitment, are a reasonable basis to recommend that relevant stakeholders implement those practices in a way that enhances the commitment of the academic staff. However, the finding that selection, performance appraisal/ evaluation, promotion, employee participation/ involvement and rewards did not significantly predict employee commitment led to the conclusion that the relevant stakeholders should not give them prominence when attempting to promote the commitment of academic staff to their jobs.

***7.3 Limitations:*** Despite the contributions of this study, a number of limitations in it can be identified. The respondents from private universities outnumbered those from public universities. Thus the feelings of academic staff from private universities might have overshadowed those of academic staff from public universities. Therefore, generalisation of the research findings to all academic staff should be taken with care. This thus suggests that future research should consider relating commitment and its antecedents in separate studies

according to the different types of universities, that is a separate study on public universities and a separate study on private universities. Besides, the study being only quantitative may have limited the reliability of the findings which calls for future studies to consider a mixed approach for in-depth analysis of the study variables.

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**Appendix Study Instrument**

| Construct | Item | Measure |
|---|---|---|
| Section A Background Characteristics | | |
| Background | BV1 | Name of the University a respondent worked in (Busitema, Gulu, Islamic University in Uganda, Kampala International, Kyambogo, Mbarara University of Science and Technology, Ndejje) |
| | BV2 | Ownership of the University the respondent worked in (Public, Private) |
| | BV3 | Position of the respondent on first appointment to the current University (Teaching Assistant/ Assistant Lecturer, Lecturer, Senior Lecturer, Associate Professor, Professor) |
| | BV4 | Current appointment of the respondent in the University (Teaching Assistant/ Assistant Lecturer, Lecturer, Senior Lecturer, Associate Professor, Professor) |
| | BV5 | Terms of employment of the respondent in the current University (Permanent, Probation, Contract, Part-time) |
| Section B Dependent Variable: Employee Commitment * | | |
| Affective Commitment (AC) | AC1 | I am very happy being a member of this University |
| | AC2 | I enjoy discussing about my University with the people outside it |
| | AC3 | I really feel as if this University's problems are my own |
| | AC4 | I am deeply attached to this University |
| | AC5 | I am part of the family of this University |
| | AC6 | I feel emotionally attached to this University |
| | AC7 | This University has a great deal of personal meaning for me |
| Continuance Commitment (CC) | CC1 | I am afraid of what might happen if I quit my job in this University without having another one lined up |
| | CC2 | It would be very hard for me to leave my job in this University right now, even if I wanted to |
| | CC3 | Too much in my life would be disrupted if I decided to leave my job in this University now |
| | CC4 | It would be too costly for me to leave this University now |
| | CC5 | Right now, staying on my job in this University is a matter of necessity |
| Normative Commitment (NC) | NC1 | I think that people these days rarely move from job to job too often |
| | NC2 | I believe that a person must always be loyal to his or her University |
| | NC3 | Jumping from this University to another seems unethical to me |
| | NC4 | One of the major reasons I continue to work in this University is that I feel a sense of moral obligation to remain |
| | NC5 | Even if I got another offer of a better job elsewhere I would feel it is right to stay in this University |
| | NC6 | Things were better in the days when people stayed in one institution for most of their career |
| Section C Independent Variables: HRM Practices * | | |
| Recruitment (Rec) | Rec 1 | I joined this University after information about the availability of job was widely disseminated |
| | Rec 2 | I obtained the job in this University after information was officially disclosed to me on the criteria to follow for me to |

| | | |
|---|---|---|
| | | get the job |
| | Rec 3 | My recruitment to this University was strictly based on merit |
| | Rec 4 | I was provided adequate relevant information about this University at the time of recruitment |
| | Rec 5 | I was given adequate relevant information about this job at the time of recruitment in this University |
| Selection (Sel) | Sel 1 | I went through a competitive selection process to obtain the job in this University |
| | Sel 2 | To get the job in this University I went through a rigorous selection process |
| | Sel 3 | When I was being selected to work in this University, my skills relevant to the job were evaluated |
| | Sel 4 | When I was being selected to work in this University, my attitudes relevant to the job were evaluated |
| Job Design (Jdes) | Jdes 1 | The requirements of my job in this University accurately reflect my understanding of the job |
| | Jdes 2 | My job in this University provides me a flexible time schedule |
| | Jdes 3 | My job in this University is designed in a way that optimises my skills |
| | Jdes 4 | My job in this University is designed in such a way that my strengths is fully evoked |
| | Jdes 5 | I have the opportunity to rotate appointments in this University |
| Performance Appraisal/ Evaluation (PAE) | PAE 1 | In this University I am appraised at regular intervals |
| | PAE 2 | In this University my performance measured on the basis of objective results |
| | PAE 3 | The appraisal system of this University advances my career |
| | PAE 4 | In this University after every appraisal I receive feedback about my performance |
| | PAE 5 | The performance appraisal system of this University is fair |
| | PAE 6 | The appraisal system of this University has a strong influence on my performance |
| Training (Train) | Train 1 | My University provides me extensive training to enhance my job performance |
| | Train 2 | In this University I receive regular training in the different aspects of my job |
| | Train 3 | My training needs in this University are identified through a formal performance appraisal mechanism |
| | Train 4 | The training programmes available for me in this University are relevant to the changing needs of my job |
| | Train 5 | In this University I have been encouraged to participate in seminars and workshops |
| | Train 6 | In this University I have been assigned challenging jobs to evoke my skills |
| | Train 7 | The mentoring I have received in this University has been vital to my job performance |
| Promotion (Promo) | Promo 1 | I have a clear understanding of the promotion requirements of my job in this University |
| | Promo 2 | Management of this University has communicated the promotion policy to me very clearly |
| | Promo 3 | There is an opportunity for me to get promoted in this University soon |
| | Promo 4 | Promotion in this University is based on merit |
| | Promo 5 | The promotional opportunities available to me in this |

| | | |
|---|---|---|
| | | University are satisfying |
| Employee participation/ Involvement (EPI) | EPI 1 | I am involved in decision making in this University |
| | EPI 2 | Open and honest self-expression is promoted in this University |
| | EPI 3 | I am given opportunity to suggest improvements in the way things are done in this University |
| | EPI 4 | I feel am equitably involved in the activities of this University |
| | EPI 5 | I participate in different administrative activities in this University freely |
| | EPI 6 | I am encouraged to participate in problem solving matters in this University |
| | EPI 7 | I am treated with respect in the handling of the activities of this University |
| Rewards (Rew) | Rew 1 | My job performance is an important factor in determining the rewards/ remuneration I receive in this University |
| | Rew 2 | The rewards/ remuneration I receive from this University are comparable to the market |
| | Rew 3 | I am paid adequately for the work I do in this University |
| | Rew 4 | I am satisfied with the rewards/ remuneration I receive from this University |
| | Rew 5 | Rewards/ remuneration are fairly distributed in this University |
| | Rew 6 | My rewards/ remuneration in this University are/is paid timely |
| Jon security and safety (JSS) | JSS 1 | I am assured of my job in this University as long as I continue performing |
| | JSS 2 | In this University staff are rarely made redundant |
| | JSS 3 | I find this University a good place for me to work in |
| | JSS4 | The place from where I work in this University has proper hygiene conditions. |
| | JSS5 | My personal safety in the University is guaranteed as I carry out my work |
| | JSS 6 | I am assured of my job in this University as long as I continue performing |
| Grievances handling Mechanisms (GHM) | GHM1 | My superiors in this University work with me to find solutions to the problems related to my job |
| | GHM 2 | In this University, problems concerning my job are first investigated to find a solution acceptable me |
| | GHM 3 | My job concerns in this University are brought out in the open so that they can be resolved in the best possible way |
| | GHM 4 | The middle course is always found to resolve impasses between me and my superiors in this University |
| | GHM 5 | My superiors in this University try to avoid unpleasant exchanges with me |

* All the items in Sections B and C were scaled from a minimum of 1 to a maximum of 5, where 1 = Strongly Disagree; 2 = Disagree; 3 = Undecided; 4 = Agree; 5 = Strongly agree.

# TEACHER DEVELOPMENT AND STUDENT SUPPORT: THE TWO OPPOSITE SIDES OF THE SAME COIN

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## ABSTRACT
It is only a burning fire that lights other fires and also radiate heat. In an Open Distance Learning (ODL) context, only empowered and also competent lecturers can give student teachers the support they require to be successful professionals. The argument is: teaching on the one hand and learning on the other are so closely linked that if lecturers can't model the teaching activity effectively student teachers under their charge will find it hard if not impossible to learn the art of teaching. This study investigated whether the lecturers involved in teacher education had the requisite knowledge, skills, values and attitude to assist student teachers to develop holistically and optimally in an appropriate and educationally meaningful and accountable manner. The results were not encouraging. It is thus argued that lecturers need to open their eyes to issues like students' ability to study, learn, communicate and write. They should become aware also of their students' motivational level, commitment level, language ability, academic preparedness, family literacy level and career aspiration. This study utilized the qualitative approach that employed probing questions as an instrument to engage ten lecturers who we approached using the convenient sampling method. The questions were structured in a way that probes the lecturers' understanding of how to manage the diverse learning needs of individual student teachers. The questions were supplemented by an extensive literature review process on pertinent sources. As already stated the results were not encouraging and the study recommends that lecturers be subjected to an ongoing empowerment programme in student support.
**Keywords:** Teacher development, student support, and Open distance learning

## INTRODUCTION AND BACKGROUND
This paper is about the growth and development of lecturers so they can perform effectively their exacting task of supporting student teachers to become what they ought to become and can become if given adequate and proper guidance. The term teacher is used to refer to student teachers and the lecturer to those practitioners of education who are involved with the training of student teachers. Practitioners of education, as lecturers, are expected to continuously up-grade themselves by learning new theories of their profession because "understanding of the development of theories is essential for any professional practitioner who may wish to implement well-grounded theoretical knowledge to contribute to the expansion of the knowledge serviceable to human kind" (Boaduo 2013, p. 1). The importance of good teachers is captured succinctly by Salmon (1995, p.27) who says "teachers seem to have been the key that opened-or locked the door to personally meaningful kinds of learning". It becomes imperative that "teachers help to implement the curriculum that is planned to help students attain their objectives" (Guinee 1966, p.11).

To achieve lofty ideals in teacher training; "each teacher must be systematically empowered in regard to curriculum development to optimize the teaching-learning events in the classroom" (Carl, 1995, p. 2). In the words of Davids (2013, p. 46) "teachers ought to enact modes of dialogical interactions by creating and engendering classroom environments where differences of opinion are encouraged and debated, rather than argued into conformity."

Lecturers in this regard, are important role-players for their beliefs, attitudes, behaviours, actions, goals, concepts and perceptions influence their students profoundly. It cannot be gainsaid that students acquire facts, principles, skills, habits, attitudes and values from their interactions with their lecturers. All these factors make it imperative that the growth and development of lecturers be regarded as a matter of profound proportions in the education profession.

Student teacher support is fundamental and also essential in assisting in the acquisition of skills, abilities and knowledge that would lead to dealing with challenges of an ever increasing complexity successfully. Through proper support student teachers should be empowered to move in a direction of greater ability, know-how and understanding. Mathipa (2012, p. 35) posit the view that "nowadays, teachers are needed who can inspire learners to be imaginative, curious, inquisitive, enthusiastic, sincere, motivated and passionate about achieving a bright future for themselves". This paper addresses crucial and core issues that have the potential to revitalize lecturer development for the sole purpose of ensuring effective and efficient student teacher support at higher institutions of learning. Revitalization of the theories, models and approaches of lecturer development is desirable in order to modify, adjust, recast or reform the teacher education. Martin (1976, p.50) advises that "great truth wants to be criticised and not idolized."

## THE PURPOSE OF THIS PAPER

The purpose is to advance the notion that lecturer development and student teacher support are like two opposite sides of the same coin in the sense that the purpose of teaching is to assist students to learn meaningfully. In other words, true teaching and learning should take place simultaneously. The purpose is underscored be the following concepts:

That human nature is very complex and behaviour difficult to predict; in this regard teachers/lecturers are supposed to be given regular workshops, seminars and opportunities of furthering their academic and professional careers so as to keep abreast with developments in general and in particular in their area of specialization. To this end, Gerber (1995, p.50) instructively points out that "in numerous fundamental areas our world has become a knowledge-driven world."

That culture influences individuals differently and that individuals too, react differently. Therefore, it is crucially imperative that lecturers acknowledge their own individuality and that of their student teachers so that in their interactions with students they can project what is positive. It is of cardinal importance to note that lecturer's opinion of the student teacher is invariably determined by the teacher's philosophy of live. Seen in this context, Van Zyl and Duminy (1984, p.98) state that "what the teacher says about work, play, adulthood, morality, religion, humanity in general will be accepted if it corresponds with his way of living".

That no theory can adequately explain the complexities embedded in human behaviour; thus there is a need to approach issues from a variety of perspectives and angles with the hope that where the one is inadequate the other might be complementary or even supplementary. Mathipa (1994, p.1) is of the view that "knowledge about reality is knowledge gained from all conceivable perspectives." This briefly means that a combination of methods, concepts and theories is necessary to unravel human behaviour.

## CONCEPTUAL FRAMEWORK

Generally, teacher education is witnessing a state of change or flux due to the pressure to find through experimentation a paradigm whose theories and approaches are capable of yielding a formula that can address the extant demands regarding the shortage of teachers. Seemingly, teacher education is moving from an independent college approach into the narrow apprentice training system that was common in the past in which prospective teachers were left almost entirely in the hands of the schools and often without ascertaining whether the schools' culture of teaching/learning is of an acceptable standard. To this end, Mathipa (2012: p. 34) is compelling when pointing out that "to place students in suitable schools means that the selected schools' culture of learning is of an acceptable standard. It also means that the selected schools have good model teachers as mentors." The emphasis is on the quality of teacher that is expected to come out of the institutions of higher learning because "quality is not something you install like a new carpet or a set of bookshelves. You implant it. Quality is something you work at. It is a learning process" (Navarro in Reyes 2012: p. xvii).

Seen from this perspective, this chapter is underpinned by a framework of concepts which describe and explain in detail what the authors mean by the concepts teacher development and student support. The issue of teacher development and student support is not only cardinal but is of paramount importance when viewed against the information that "in 2010, some 16 000 Unisa students registered for teaching practice" (Maila in Mathipa 2012: p. 34). The question will be: are the lecturers giving guidance and support to these student adequately and appropriately capacitated and empowered to fulfill into their responsibilities, duties, roles and functions? These questions are asked under the section on methodology of accountability. To sum up, the concepts teacher development and student support are hereunder discussed as:

**Knowledge of the type of teachers that need to be developed;** because this will help in designing intervention programmes and strategies if we know who are the lecturers who need to be assisted and what type of knowledge they lack. Thus, in-service training or workshops plus seminars should not be seen as a waste of valuable time, effort and resources. Through such intervention strategies and programmes lecturers will become aware of their own deficiencies and also of the needs of their student teachers and hopefully develop healthier relationships with them. Our guiding philosophy is precisely that an adequately developed teacher/lecturer both academically and professionally is a boon to the education profession. Carl (1995, p. 2) argues that "an empowered teacher is pre-eminently able to develop pupils' potential optimally."

**The type of academic preparation the teachers need**; this information will be helpful as it will facilitate the placing of teachers into categories that accord with their academic and professional qualifications. Teachers/lecturers have different qualifications and as such need to be placed correctly to avoid boredom and loss of interest and confidence. To this end, the epistemology which guides and drives our understanding is that lecturers who grow and develop both academically and professionally are better positioned to unfold and mould the student teachers optimally in a balanced and sound manner. Gorton (1983, p. 18) contents that; "the school must not only prepare students for current circumstances and challenges but also for their adult life." In this regard, "teachers are crucial role-players in the educational inclusion learners, their retention at school and the facilitation of their school completion" (Daniels & Mwingira, 2013, p. 84).

**The type of professional development the teachers need**; because teachers/lecturers possess different professional qualifications that qualify one teacher/lecturer to teach at primary school and the other at high school and so on. Therefore professional growth and development should be pitched at a level of the teacher's needs and not above or below. Our axiological stand point which forms the ground work for our educational practice is that "from which one may not deviate, but rather as an opportunity to experiment and still make it relevant and meaningful."

**Knowledge of the students the teachers are teaching:** is important in the sense that whatever teaching methods/approaches the lecturers are taught must be of benefit to their student teachers. Therefore, whatever methods of teaching the lecturers are exposed to eventually assist them to be more effective when interacting with their student in the classroom. Van Zyl and Duminy (1984, p. 3) are of opinion that "all education includes teaching by the educator and learning by the educand." In another breath Nzizeyimana and Osman (2013, p. 99) state that "knowing first-year student teachers' beliefs about the profession they are training for is of paramount importance for teacher educators because these beliefs have a decisive impact on student engagement or involvement in learning to teach and their classroom practice."

**Knowledge of the subjects the teachers are teaching;** the student teacher is of paramount importance because lack of content knowledge on the part of the lecturer leads to student teachers losing respect and confidence in the lecturer. According to Van Rooyen (1987, p. 72) points out that "a good teacher is never satisfied or content with the qualifications he has achieved. He remains a student… by always improving his teaching his academic and professional qualifications in order to improve his teaching abilities." Huysamen (1999, p.104) avers that "it is, however, reasonable to accept that people in jobs which do not match their preference profiles will probably be dissatisfied, and their performance will be adversely affected."

**The languages use for instruction;** this poses a huge problem because invariably Black students who are in majority are always taught through the medium of English or Afrikaans and by teachers who most of the time are Non English nor Afrikaans speakers themselves. Such a situation compromises the teaching-learning occurrence because "it is accepted by socio-linguists universally that mother-tongue instruction provides the most favourable conditions for learning" (Cachalia, 1995, p. 156). There is therefore a pronounced need to in-service teachers on an ongoing basis with respect to language mastery and proficiency. A language is part and parcel of a people's culture and we are warned that "when culture is ignored, it has a way of resurging and returning to sabotage most ambitious development plans and processes that have neglected hem" (Mama, 2006, p. 55). Du Plessis, Muller and Prinsloo (2005, p. 685) also point out that "students' language comprehension and reading ability seriously affect the amount of reading they can do and the level and the level of comprehension they can attain within 120 notional hours.'

**Levels of motivation of both teachers and students;** is of paramount importance in the didactic situation for the single reason that "self-efficacy is related. to motivation in that if an individual believes he or she has the capability to perform a task and that performance will then lead to a positive result, the individual will be motivated to perform" (Pretorius. Prinsloo

and Uys, 2010, p. 135). In other words, the intervention that is provided should address issues of motivation in order to sensitise and conscientise because "ideally, all teachers should support inclusive principles and commit to educating each child to her fullest potential in the classroom" (Daniels & Mwingira, 2013, p. 84) An individual who is without motivation is disabled and is unlikely to achieve anything which is worthwhile.

**Gender composition of both teachers and students;** it is important to take into consideration the gender profile of the lecturers and student teachers in an institution so as to be able to provide resources accountably and in a just and fair manner. Accordingly, Mama (2006, p. 57) posits the view that "gender inequalities have persisted in African universities, both in the institutional profiles, in their cultures, and their core business of teaching and research." In other words, there is still much to be done to bring about a level playing ground in respect of gender disparities.

**Literacy levels of the communities from which students come from;** this means that cognisance should to be taken of the areas and environments from which student teachers come from because of culture differences. Student teachers from urban areas have an advanced knowledge in the field of technology which rural students do not have. English speaking students have an advanced cultural capital language-wise than the Non-English speaking students. To this end, Petrick (1986, p. 46) states that "every individual's situation is unique, and therefore the individual is unique." Consequently, Ferreira and Monyemorathwe (1993: p. 8) point out that "many Black adolescents find themselves in a milieu which is characterised by a low socio-economic and cultural level and which adversely affects their self-concept."

**The mean age of both teachers and students;** the matter of age is cardinally important because of the generation gap which describes "the difference in attitudes and understanding between one generation and another" (New English Dictionary and Thesaurus, 2000, p. 260). It will be advisable to bring into the workshops and seminars teachers of different age groups so as to facilitate sharing, bonding, networking and partnerships to take amongst peers, cohorts and contemporaries.

The idea is not to exhaust the list by merely to highlight the factors that are of fundamental importance in the empowerment and development of lecturers who are naturally expected to give their student teachers support and guidance. Meehan (1988, p. 1) is instructive when arguing that "very little of human behaviour is directed by instinct or natural inheritance and human success in the world is almost entirely dependent on the creation, application, and improvement of knowledge."

## THE THEORETICAL FRAMEWORK

To strike the keynote, it is an undeniable fact that the world today is like a global village and education is a main player in contributing towards the perception of a shrinking world. Through human effort in the form of a variety of literary sources and technology; information distribution throughout the world has become an instant occurrence. This has enormous implications for the institutions of education which are thus bombarded with new knowledge, experiences, innovations and ideas on a daily basis. Education has the tendency, either in the short or long run, to permanently alter a person's perception on life. In such an environment of flux, there is thus a need to empower teachers on an ongoing basis so they can be in a

position to keep abreast with the diverse needs of students. Borkar (2011, p.56) interestingly argues that "experiences from purposeful initiatives in the alternative education arena have demonstrated and proven that learning is indeed life-long and is often sought through diverse modes of social and cultural appropriateness, to address and deal with ever-changing realities and issues that confront individuals and communities." Thus, it can be concluded that; a course/subject is needed that will sensitise teachers/lecturers to the characteristics of student teachers that may have a negative influence on learning outcomes.

Such a course/subject should not attempt to make teachers become counselors, but lecturers as the first in the line of contact with student teachers are expected convey a sense of understanding and concern for the diverse needs of their student teachers. This chapter posits the view that; through teacher/lecturer development interventions a healthier relationship may emerge between teachers/lecturers and their students. In searching for an appropriate theory to capture the importance of the concept of teacher development, it is worthwhile to note that Kuh, Whitt and Shedd as quoted by Bloland, Stamatakos and Rogers (1994: p. 23) are of the opinion that; "no theory can adequately explain the complex web of human behaviour found on campuses. These researchers warn against the blanket application of theories in programme development that expect success to be a given." In other words, whatever theories are advanced by this chapter, the impression should not be created that they are the only ones that can empower lecturer to be able to support, assist and guide the student teachers.

To sum up, there are vast difference between such terms as change, growth and development which terms are bedrock of discussions in this chapter. While change means "making or becoming" (Matseke, 2000, p. 23) and growth on the other hand means "to come into being, to be produced naturally, to develop, as a living thing; to increase in size, quantity etc" (New English Dictionary and Thesaurus, 2000, p. 274). Whereas, development per se means; "…a process whereby a person acquires skills, knowledge and capabilities to deal successfully with life issues of ever increasing complexity" (Van Schoor, 1998, p. 23). No doubt therefore, that teacher development can lead to change, growth and also development of the teachers' skills, knowledge, capabilities, attitudes and behaviour. A developed teacher is boon to the teaching profession because not only learners will benefit but society in general will also benefit from such an empower teacher.

**Checkering's seven vector theory**

In a book titled: *'Education and Identity published in 1969'* Checkering's theory of development is extensively discussed. The theory is based on seven vectors which occur at different times in different individuals. The main fact that this theory is emphsising is that; development takes place at different paces for different students. The seven vectors that theory discusses are summerised hereunder as:

**Development competence:** it claims that naturally, a person wishes to be competent intellectually, physically/manually and interpersonally (Chickering & Rieser, 1993). To be competent intellectually means that one has mastered the knowledge and terminology require in subject of study. While to be physically/manually competent means that one has mastered the skills required to perform works of art, sport activities and so on. Whereas to be interpersonally competent means that one has developed an appreciation of beauty or aesthetic appreciation. Teacher development should cater for this need in its empowerment intervention programme.

**Management of emotions:** it argues that, a person is likely to experience both the negative and positive emotions and as such lecturers should be sensitive to the plight of their student teachers who may at times exhibit emotions that are questionable. Again, teacher development should cater for this need so that students can be enabled to co-exist in a social environment.

**Moving through autonomy towards interdependence:** it asserts the view that students like any person also feel the urge to forgo their freedom and wish to be accepted by others. In other words, students as human being wish to be reassured, appreciated and accepted because man is by nature a gregarious animal and becomes alive when involved in activities of a social nature. As a matter of fact, teacher development should also empower teacher to be able to cater for the social needs of their students.

**Development of mature interpersonal relationships:** it claims that tolerance and acceptance are two central themes in lives of students when it comes to interpersonal and inter cultural domains. This is so because to establish intimate and lasting relations one needs to be patient and tolerant. Furthermore, teacher development should capacitate teachers in this area so they can cater for their students need in this respect.

**Establishment of identity:** it asserts the view that, each student wish to establish an identity that expresses one's personality. The issue of identity is complex because it is too individualistic, in the sense that, it has to deal with matters of sex, race, and religion, cultural and social back-ground and different life-styles. It is of cardinal importance; therefore, that teacher development should take the issue of identity establishment by their students very seriously.

**Development of purpose:** it argues that; student teachers need to be prepared by their education to succeed in their vocation. It also means that student teachers should be help to realise a spiritual life that is fulfilling.

**Development of integrity:** it posits the view that; every person's life revolves around certain values he or she espouses. The students should be supported by their teachers to establish a system of values that will crystalize into a personality based on ethical values that are beyond suspicion. Finally, is critical that teacher development should capacitate teachers in this area so they can cater for their students need in this respect.

To recap, there theories of develop by authors like Perry (1970), Kohlberg (1969), Piaget (1967) and many ca also be utilized to address whatever interventions planned to empower the teachers to be in a position to support their students effectively and successfully.

**The areas of students' developmental needs**

The recent political changes in the land have great affected the higher education landscape in such a manner that variable levels of academic preparedness of students from both rural and urban areas have strongly emerged. These differences in students' socio-cultural back-grounds mean that "tertiary education institutions in South Africa are faced today with a very heterogeneous population with vastly different levels of preparation for tertiary studies" (tutorial letter 501/2008: p. 27). To compound the problem, Pavlich and Orkin (1993:p.32) when stating that; "in spite of the publicity espoused principle of 'separate but equal'

provided for in terms of facilities, staff and income compared with the newly created black, Asian and coloured institutions." Without laboring the point, it is a trite fact that white learners perform better at matriculation that other racial groups and hence stand a better chances of success at tertiary as well. This gap in students preparedness calls upon institutions to have to having a teaching staff that is empowered to be able to support students whose needs are so different.

In conclusion, there is a dire need to empower through teacher development programmes the lecturers who are entrusted with the task of supporting students to achieve their desires/dreams.

## RESEARCH METHODOLGOGY

The study used the qualitative approach because Creswell (2013) characterises it as an interpretative inquiry, wherein the researchers interpret what they see, hear and understand from their own background, history, context and prior understanding. In this study, the authors interpreted the answers of the participants according to their own expectations of what a lecturer should support student teachers. A convenient sampling is made up of people who are easy to reach. In this study, only those lecturers who were available, willing and interested in participating in the study were selected. Convenient sampling was used to collect data from ten willing lecturers in the Department of Teacher Education here at Unisa. The ten participants were targeted because they are responsible for practice teaching and are the ones in charge of supervising student teachers during their pre-service training. The staff members of this department are few as this is the smallest department in the College of Education. The initial sample consisted of ten participants with five males and 5 females. All are experienced academics with the majority having more than ten years teaching experience at teacher education institutions. The remaining few had five years teaching experience at university and also had teaching experience in schools that covered more than 10 years. While the rest bar one had their Doctoral degrees albeit with varying years regarding when they got them.

A questionnaire was used to collect data. The questionnaire was first piloted to test its efficacy. Finally, the questionnaire was given to the ten participants electronically. Ethical considerations were observed by not mentioning the participant's names and those who participated did so willingly. From the ten staff members who were given the questionnaire only six of them responded giving us a return of 60% which is above average. The research questions focused on teacher development and student support and are summerised here under as:

- As a lecturer were you exposed to content that prepare you to be able to support your students to develop intellectually, emotionally, spiritually and interpersonally?
- Can you mention a subject/s or course/s that prepared you to be able to support your students holistically?
- How many times per year are you provided with workshops and seminars that empower you in your role of giving support to your students?
- Which theories do you use to underpin your intervention programme/s that you personally use to capacitate, empower and support your students?
- What do you tell your students to do in order to create an environment in which they can study effectively?

- Do you think that lecturers need a specific subject/course that is solely meant to prepare them to be able to assist, guide and support their students to succeed in their studies?
- You may enlarge and expand on this.

## RESEARCH FINDINGS

The major themes that emerged from the analysis are: The importance of regular and compulsory workshops in order allow lecturers to keep abreast with developments, the importance of maintaining ongoing channels of communication between lecturer and student teacher, the problems of using a language of instruction that does not promote meaningful understanding between the lecturer and student, the need to make sure that learners have the required financial resources in order to meet pressing needs like accommodation, food, clothes, transport, books and so on. In conclusion, to assist student develop holistically and optimally means that the lecturers must a view student like their own child.

### Regular and compulsory workshops

Most of the respondents illustrated the need for regular and compulsory workshops for all lecturers so they can be sensitized to the real needs of student teachers in order to able to develop the students fully and accountably. Gouws and Dicker (2007, p. 244) point out that "ii-service training gives teachers the opportunity to discuss their problems with colleagues and to generate solutions to these problems." Accordingly, Dzvimbo (1995, p. 55) is of the opinion that "for empowered and transformative teacher to take root in the classrooms, PRESET and INSET teacher education needs to introduce student teachers to methods of managing change and innovation in schools geared towards classroom and school improvement and renewal."

To crown it, all the participants are of the opinion that teaching practice and student supervision should be the responsibility of all academics in the College of Education. That supervising students will be simple and effective if all academics were participating given the huge number of students who need proper supervision. Seemingly, most of the academics appear to regard student teacher supervision which is mostly conducted through school visits as not their responsibility.

This perception goes against the need to develop a student teacher holistically and optimally as it is logistically impossible just to cover all the students in all provinces using a small number of lecturers. Compulsory workshops conducted on a quarterly basis may assist greatly in forming a strong relationship between the student teacher and the lecturer as this will enable lecturers to know what are real needs of their students. What is of significance here is that the student teachers are the teachers of tomorrow and it is imperative that they are developed holistically and optimally so they are empowered to be able to carry the good teaching habits into the future.

## LANGUAGE USAGE

Downs (2005, p, 678) instructively reveal that "following feedback from first-year lecturers, students have poor skills in the following areas: summerising, identifying key concepts, discussion, essay writing and comprehension (pers. Comm., per sobs.)." on the contrary, Alexander (1991, p. 18) indicates that "there is, of course, no doubt that the use of English as

a second language is spreading rapidly among black middle-class people." However, most lecturers indicated that their most challenging situation is epitomized by the language of instruction which is English and is largely used as either a second or even a third language by the majority student teachers who struggle to communicate effectively in it. Some lecturers too, are not altogether adept at speaking this language as well.

Therefore, most of the lecturers interviewed expressed the view that the majority of the student teachers were unable to write coherently and that they were also unable to read it with understanding. This becomes a serious problem because most of the time the lecturers communicated with student teachers through telephonic conversations, emails and myUNISA, tutorial letters and SMS. This leaves a big communication gap that ultimately adversely affects the way students develop. Without question, this mode of communication also effectively excludes those students residing in rural areas where there is no technology.
The use of either English or Afrikaans as the medium of instruction unfortunately affects the majority of student at UNISA because most feel comfortable communicating in their own indigenous African languages. To exacerbate the issue, some of the student teachers come from other African countries and speak different languages like; French, Portuguese or other languages depending on their countries of origin.

Although the majority of student at UNISA are second language speakers there are no language support structures within the College to assist these students to improve their language proficiency skills which will include academic writing and reading with comprehension and making notes and summaries. The teacher Education development program aims to develop students holistically and its failure to meet the need with regards language issues needs to be addressed.

**A course is needed to prepare lecturers in the art of providing holistic development to their students**

Thomen (2005, p. 813) states that "the Committee of Teacher Education Policy (COTEP) considers the professional development of practitioners as one way to improve the quality of professional practice." Thus, the aim of introducing the course should be to equip future lecturers with the knowledge and skills of developing student teachers holistically as it will make future teachers to know the needs of their learners well. Such teachers will in future be capable of advising their students with regard to the career opportunities and also play a significant role in making sure that students are successful in their studies.
The envisage course is justifiable because it can also help in empowering those lecturers who were themselves not trained as teachers. It is logical to argue that; those lecturers who were not trained as teachers might regard taking part in practice teaching as a waste of time. This might be one of the reasons why some academics are not interested taking part in teaching practice.

Finally, such a course should introduce lecturers to the problems gender and the persisting lack of gender parity as "discrimination against women and girls in South Africa cuts across the boundaries of race, age, ethnicity, and so on, although every social, political and economic indicator demonstrates that black, working class women and girls are mostly severely disadvantaged" (Everatt 2001, p. 168). Lecturers should engage the problem of gender disparity in their role of developing students holistically.

**Providing students with financial resources that met their basic needs**

The issue of financial resources is a real one and seems to have no immediate solution. Presently, universities have students who mostly come from poor families that cannot afford the high fees needed to keep a student at university. It is at such moments of dire need that a resourceful lecturer can come to the aid of a deserving student and open doors of opportunity that will result in the student being optimally develop.

A resourceful lecturer knows that there are many ways of skinning a cat and also knows that where there is a will there is a way.

## CONCLUSION

There is no question that lecturers need to be continuously workshopped on issues of student support and assistance so that they provide the student with appropriate guidance that will lead to the student developing holistically and optimally. This aspect was also highlighted by many sources like Dzvimbo (1995, Borkar (2011), Checkering & Rieser (1995), Downs (2005) and Du Plessis, Muller & Prinsloo (2005). The respondents too, were of the same opinion.

It goes without saying that lecturers need to use a language of instruction that is understood by a student so as to maximize the chances of success on the part of the student. It is imperative therefore that the lecturers are constantly engaged actively in seeking new ways of communicating effectively with their students. A language is not static, and it becomes even imperative to keep up to date with developments taking place in the language of instruction (English) which happens not to be the home language of most lecturers and their students.

Without gainsaying it, a course is needed that will empower present and future teachers so they can be able to develop their learners holistically and optimally. Presently, such a course does not exist and this disadvantage most of the lecturers.

The issue of financial resources has been long simmering and it now needs an urgent solution because an educated citizenry is a boon to a country. Education is a right and must be seen to be so. The Afrikaners have a proverb that says: ‘geld make reg alles vat krom is.’

## RECOMMENDATIONS

It is recommended that workshops on a continuous basis be provided lecturers so as to empower them with the latest needs of their students who come from diverse localities and socio-economic backgrounds.

It is proposed that lecturers of student teachers receive ongoing short courses in language content and pedagogy because as times changes so is language and its dynamics and the way to communicate in it or how to teach it.

Overall, teacher education is the key department in the ODL situation that is responsible for the production of future teacher, therefore, institutions should employ lecturers that are focused and dedicated so they will be conscious of new challenges their students are likely to face. It is thus recommended that only lecturers with a track record of having taught in schools for above 5yrs be considered for employment in teacher education. People with experience of how to teach must be the ones to teach the student teachers the art of teaching.

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