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SELF-EMPLOYABILITY INITIATIVE: DEVELOPING A PRACTICAL MODEL OF DISABLED STUDENTS' SELF-EMPLOYMENT CAREERS

Reuel Johnmark Dakung[a]*, John C. Munene[b], Waswa Balunywa[c], Laura Orobia[d] and Mohammed Ngoma[b]

[a]*Faculty of Management Sciences, Department of Business Administration, University of Jos-Nigeria, Nigeria;* [b]*Faculty of Graduate Studies and Research, Makerere University Business School, Kampala, Uganda;* [c]*Department of Entrepreneurship, Makerere University Business School, Kampala, Uganda;* [d]*Department of Accounting and Finance, Makerere University Business School, Mbarara Regional Campus, Kampala, Uganda*

This study investigated the self-employability initiatives of disabled university students by presenting a model that would allow the concept to be explained and used easily as a framework for working with students to develop their self-employment careers. A cross-sectional survey with a quantitative method constituted the study's research design. A sample size of 254 university students was determined using the Krejcie and Morgan (1970) sample size selection model. Data were analyzed using demographic statistics, correlation analysis and the structural equation model (SEM). The results revealed that entrepreneurship education, action mechanisms and university role have a positive influence on the self-employability initiatives of disabled students. The results also indicated that action mechanisms mediate the relationship between entrepreneurship education and the self-employability initiatives of the disabled students in this study. Universities that provide enabling premises for disabled students, foster the development of networks and provide them access to coaches, mentors and research results will trigger the self-employability initiative of disabled students. This study indicates a number of implications for tertiary institutions and policymakers, particularly that entrepreneurship education and the role the university plays make significant contributions to the self-employability initiative of disabled students. Policymakers need to design entrepreneurship curricula that will be appreciated by students with disabilities.

Keywords: action mechanism; entrepreneurship education; self-employment initiative; university's role

INTRODUCTION

The contribution of creative and qualified self-employed individuals to economic growth and job creation is recognized across the globe (Kritikos, 2014; Valliere & Peterson, 2009). Self-employment initiative are seen as the hub that drives economies across nations through their contribution in terms of job creation. Job creation through the establishment of ventures is seen to be initiated by individuals because it helps in explaining the reasons why they choose to start their own businesses

*Corresponding author. Email: reueldakung@yahoo.com

(Kautonen, Down, & Minniti, 2013; Krueger, Reilly, & Carsrud , 2000; Davidsson, 1995). For instance, with the collapse of the last vestiges of the socialist economic system in 1991 and the global economic meltdown of 2008 which peaked with worrying job losses arising from the collapse of blue chip companies around the world, people embraced self-employment (Kritikos, 2014; Mazanai & Fatoki, 2012; GUESS, 2011; Naude, Amorós, & Cristi, 2014; Valliere & Peterson, 2009). This suggests that self-employment creation is required to improve the quality of peoples' lives.

Additionally, more than half the workers in low-income countries (53%) and more than a third in lower-middle-income countries (36%) are self-employed, mainly in agriculture in both cases (Fields, 2014). For instance, in India, the self-employment rate is placed at 82%, in Ghana at 82%, in Kenya at 67% and in Mali at 64%. Also, rates of self-employment are particularly high in South Asia and sub-Saharan Africa (Fields, 2014). This goes to show that in developing economies, the majority of people are often self-employed. Although the Entrepreneurship Monitor (GEM) showed that 37% of Nigerians were self-employed in 2014, the latest report (between December 2015 and March 2016) by the National Bureau for Statistics (NBS, 2016) revealed that the population of unemployed Nigerians increased by 518 000 to over 1.45 million. More worrisome is the seemingly low decision rate by persons with disabilities (PWDs) who constitute about 14.1% of the total population to venture into business (Onwe & Okoro, 2015; Sango, 2013; WHO, 2011). Also, findings on the value of their involvement in self-employment initiative in the economic policy of the country is insufficient. The scanty statistics on PWDs suggest that many are unemployed or at best underemployed. This assertion supports the fact that because PWDs are discriminated against and excluded in Nigeria, just 4% are self-employed or have access to economic empowerment and about 60% are seen to be unemployed (Global Accessibility News, 2015; UNDP, 2015). The marginalization of these people in relation to self-employment is extensive, and theoretical development in understanding their engagement in entrepreneurial activities is still lacking (Namatovu, Dawa, Mulira, & Katongole, 2012). This raises a concern on the role played by the Nigerian universities in empowering PWDs in terms of self-employment.

Self-employment initiatives, which are viewed in terms of the productive activities engaged by individuals to earn a living, are being emphasized by institutions of learning (Keat, Selvarajah, & Meyer, 2011; Trevelyan, 2009; Carter, Gartner, & Reynolds, 1996; Begley & Boyd, 1987). Evidence shows that the integration of such factors as entrepreneurship education, action mechanisms and university role will influence graduates' self-employment careers. This suggests the need to understand the factors that enhance self-employment initiatives of university students. Previous studies have investigated the impact of factors such as role models (Wang & Wong, 2004; Schmitt-Rodermund, 2004; Laviolette, Lefebvre, & Brunel, 2012), subjective norms (Kolvereid & Isaksen, 2006), personality (Rauch & Frese, 2007; Zhao & Seibert, 2006; Drnovsek & Erikson, 2005; Krueger & Brazeal, 1994), entrepreneurship education (Premand, Brodmann, Almeida, Grun, & Barouni, 2016; Gibcus, de Kok, Snijders, Smit, & Van der Linden , 2012; Kuratko, 2005; Davidsson & Honig, 2003; McMullan & Gillin, 1998) on students' self-employment initiative. However, the focus of most studies is largely on able-bodied persons, with very few examining the combined influence of entrepreneurship education (EE), university role (UR) and the mediating role of action mechanisms on self-employment initiatives among disabled persons. It is in this context that the current study seeks to explore these

factors by developing a practical model of disabled students' self-employment careers. Specifically, this study intends to investigate the relationship between entrepreneurship education, university role, the mediating role of action mechanisms and self-employment initiatives of disabled students.

The rest of the paper is structured as follows: The next section discusses the theoretical background followed by literature review: self-employment, entrepreneurship education, action mechanisms, university role and hypotheses formulation. This is followed by a description of the approach employed to collect and analyze the data and thereafter the results are presented. The last section comprises discussions of findings, conclusions, implications and limitation of the study.

THEORETICAL FRAMEWORK, LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

To develop a practical model of the self-employment careers of disabled graduates, this study is anchored in Action Regulation Theory (ART) which proposes that the psychology of work should be concerned with actions that are defined as goal-oriented behaviours. It provides a useful framework to examine the tasks (business activities that must be performed) by focusing on certain necessary mechanisms, e.g. goal intentions, action plans, action knowledge and self-efficacy (Hacker, 1985; Frese and Zapf (1994)). Anchored in the theoretical framework of Action Regulation Theory, this study argues that education, university role and action principles enhance disabled students' entrepreneurial spirit for self-employment. The theory then offers clear and insightful explanations for self-employment knowledge acquisition by disabled students that could lead to venture start-ups. This is due to the fact that they will appreciate the entrepreneurship programme in enabling them to recognize business opportunities, develop business ideas and venture into viable business opportunities. This is in line with Gielnik et al. (2015) and Levie (1999) who were of the opinion that students would venture into business if they interacted well in class and were taught the likely pitfalls they would face and the possible strategies to curb them. Similarly, Powell (2013) argued that exposing young people to entrepreneurship as an academic subject would enable them to develop a better understanding of self-employment as well as make better decisions in choosing different paths of entrepreneurial careers.

Concept of Self-employment

Self-employment (SE) can be viewed as a commitment by an individual to earn a living through starting a business. It could also be regarded as the simplest type of entrepreneurship because self-employment rarely requires significant financial investment, advanced management skills or an understanding of the legalities involved in setting up or operating a business (Blanchflower, 2000; Spencer & Gomez, 2004). Thus, a self-employment initiative could evolve into an economic activity which one can perform on one's own as a gainful occupation, and could consist of producing and selling goods, buying and selling goods, or rendering services for a price.

Self-employment initiatives for PWDs are significant because they allow PWDs to customize their work experiences specifically to their needs and to design work environments that optimize flexibility and accommodation (Viriri & Makurumidze, 2014; Thurik & Wennekers, 2004). This links well with the argument of Arnold and

Seekins (2002) that self-employment can be used as a potential rehabilitation vocational tool to achieve faster and better integration of PWDs into the labour market. PWDs are believed to be natural entrepreneurs, given the fact that being disabled often propels them to be independent problem-solvers. This is seen in developed countries like the UK and the USA where PWDs have a higher rate of self-employment than people without disabilities (Dakung & Munene, 2016; Kitching, 2014; Pagán, 2009; Harper & Momm, 1989). The argument then reveals that people who are excluded from society often build initiatives of starting their own enterprise. The successful enterprise then often serves as an avenue for instituting confidence and satisfaction in the person. Hence, self-employment ought to be emphasized more frequently to help PWDs move from unemployment and welfare-based income to gainful employment (Burchardt, 2003; Blanck et al., 2000; Harper & Momm, 1989).

Furthermore, it is argued that PWDs, especially in Nigeria, are largely invisible, ignored and excluded from mainstream development. This is reflected in the areas of disempowerment and economic exclusion. No matter where PWDs live, they are statistically more likely to be unemployed and underemployed due to lack of access to developed support connections and social capital than their able-bodied counterparts (Sango, 2013). This is supported by the submission of scholars like Dakung and Munene (2016) who observed that due to the fact that PWDs in Nigeria are stigmatized, discriminated against and marginalized in every facet of life, their participation in self-employment (SE) is low. Furthermore, the insufficient statistics and number of studies on the value of disabled entrepreneurs in Nigeria suggests that many are unemployed.

Entrepreneurship Education

Entrepreneurship education (EE) refers to the scope of curricula, lectures or courses that provide students with entrepreneurial competencies, skills and knowledge that assist them in pursuing entrepreneurial careers (Ekpoh & Edet, 2011; Keat, Selvarajah, & Meyer, 2011; Fayolle, Gailly, & Lassas-Clerc, 2006a; Van Clouse, 1990). It is one area that champions the principle of inclusivity, integration and mainstreaming that is promoted by school administrators, course developers, government (public) servants and researchers (Kuratko, 2005). Rae (2010) argued that universities must respond to the global recession of 2008 whose aftereffects still linger and the subsequent new economic era in their provision of education and learning for entrepreneurship. To respond to this, EE should be prepared for all university students, regardless of their majors, in order to improve their competitive advantage (Lee, Chang, & Lim, 2005). Evidence of this need is seen in the growing number of young people and high-calibre graduates across the globe who are desirous of becoming entrepreneurs (self-employed) rather than being employees of large corporations (Kelly, Bosma, & Amoros, 2011). Emphasis on EE has been advanced as a way to drive development and sustainability of economies around the world (Neck, Greene, & Brush, 2014). Concurrent with this trend, the demand for EE at various academic levels has also increased steadily. One of the key purposes is to give students a thorough understanding of becoming self-employed (Solomon, 2007; Heinonen & Poikkijoki, 2006).

Entrepreneurship education for students with disabilities is very important in the area of self-employment and market development (Viriri & Makurumidze, 2014;

Gnyawali & Fogel, 1994). To enhance their self-employment initiatives, disabled students need customized training in terms of business plan development, strategic planning, decision-making, negotiation, pricing, market penetration, management of the workforce and handling of cash-flow, among other issues (Viriri & Makurumidze, 2014; Swanson & Webster, 1992). This links well with Powell (2013) who pointed out that guest lectures should be provided by entrepreneurs and professionals (in our case, successful disabled entrepreneurs) for the students. These experienced and knowledgeable guest speakers could offer these students realistic feedback to as well share their experiences with them. Powell (2013) also maintained that an entrepreneurship educator should play the role of coach rather than supervisor to enable students to develop more realistic understandings of their abilities, pursue the applied knowledge that is particularly useful to them, and learn to adapt rather than imitate examples blindly.

Entrepreneurship Education and Self-employment Initiatives

Entrepreneurship education is a process that provides students with entrepreneurial competencies and confidence required to venture into business (Oosterbeek, van Praag, & Ijddeltein, 2008). This is evident from the strands of studies conducted on the importance of entrepreneurship education in producing potential entrepreneurs that will create jobs (Kuratko 2005; Raichaudhuri 2005; Venkatachalam & Waqif 2005; Kolvereid & Moen, 1997; Kourilsky 1995). For example, Volery and Mueller (2006) highlight the role of entrepreneurship education in influencing an individual's tendency to become an entrepreneur. Similarly, Anam, Iba, and Aregbe (2014) established that there is a significant relationship between entrepreneurial education and employment creation.

The purpose of developing entrepreneurship courses is to stimulate self-employment initiatives. Therefore, entrepreneurship education is key in developing and fostering self-employment initiatives (Hannon 2005; Charney & Libecap 2003). Also, common pedagogies such as lecturing and writing business plans, which are more teacher-centred, remain frequently used in entrepreneurship education (Birdthistle, Hynes, & Fleming, 2007; Pittaway & Cope, 2007; McKeown et al, 2006; Jennings, 2002). This then suggests that entrepreneurial learning should be student-centred, using active-application and active experimentation approaches rather than teacher-centred approaches, so that students can acquire real-life experiences and develop techniques during the enterprising learning process (Garavan & O'Cinneide, 1994; Hytti & O'Gorman, 2004; Hegarty, 2006; Birdthistle et al, 2007). Based on that, action learning has been viewed as one of the most effective tools for enhancing the effectiveness of any entrepreneurial development programme designed to develop the entrepreneurial skills, knowledge and attitudes of students (Pittaway & Cope, 2007; Jones & English, 2004; Jones-Evans, Williams, & Deacon, 2000). Focusing on disabled students, there is need for some initiatives by lecturers in teaching entrepreneurship. Also, making provision for instructional materials and recorded lectures on entrepreneurship education (for blind and partially blind students), providing sign language interpretation or information in accessible formats as well as involving them fully during lectures will give them a more practical and clearer picture of business start-ups. Depending on the context, the outcomes of the portfolio of the various teaching methods employed in learning entrepreneurship

will enhance students' (in our case disabled) self-employment (Clarke, Thorpe, Anderson, & Gold, 2006).

In a similar vein, entrepreneurship education influences students' capacity to deal with real entrepreneurial activities. This raises their awareness by providing opportunities for them to learn from real-life practical experiences that make them think of self-employment as a career (Edwards & Muir, 2005; Hynes, Costin, & Birdthistle, 2011; Kirby, 2004). To further enhance the self-employment initiatives of disabled students, entrepreneurship education (in terms of the course content) should be customized to fit their specific characteristics. Additionally, the core structure of teaching entrepreneurship courses should draw on critical thinking, reliance on experience, business-general knowledge, thinking about entrepreneurship as a career, opportunity-specific knowledge, and use of guest speakers who are experienced entrepreneurs (Vesper, 2004; Brown, 1999). This then points to the fact that entrepreneurship education enhances disabled students' self-employment initiatives (Delmar & Davidson, 2000). This leads to the following hypothesis:

H1: Entrepreneurship education is positively related to the self-employment initiatives of disabled students.

University's Role and Self-employment Initiatives

Universities play a crucial role in promoting entrepreneurship that will develop regional and national economies (Binks, Starkey & Mahon, 2006; Co & Mitchell, 2006). They also have a key role in promoting entrepreneurship since educational institutions are considered the ideal place to shape entrepreneurial aspirations of students while studying to survive in today's complex business world (Landström 2005; Autio, Keeley, & Klofsten, 1997; Mahlberg, 1996). This could be because universities are seedbeds of entrepreneurship in teaching students the way to think and how to behave entrepreneurially to become self-employed (Bygrave, 2004). Universities, in this respect, are positioning themselves as reservoirs of knowledge by making substantial contributions to the development of self-employment initiatives among students (Nurmi & Paasio, 2007; Gnyawali & Fogel 1994).

As providers of entrepreneurship training programmes, universities are doing all they could to create an entrepreneurially supportive environment for students to become self-employed. This tends to reinforce entrepreneurial activities that would help develop an enterprise culture among university students who are tomorrow's entrepreneurs (Roffe 1999). Autio, Keeley, and Klofsten (1997), in their study on entrepreneurial intentions of technology and sciences students across four countries, concluded that university teaching environments are the most influential factors that affect students' perceptions towards entrepreneurial careers and self-employment. Hence, it is important to present a positive image of self-employment as a career option to draw students' attentions within the university environment by providing relevant resources and making suitable facilities available to them. This is necessary because even though individuals may have the relevant entrepreneurial knowledge and skills, if they do not possess a positive image about self-employment initiatives, they might eventually not venture into business (Alberti & Sciascia, 2004). Towards this end, by creating an entrepreneurial culture across the campus, universities are expected to influence students' decisions to create businesses. This is owing to the fact that students' preferences towards careers can easily be influenced by the

environmental conditions with which they interact (Fayolle & Degeorge 2006; Gnyawali & Fogel, 1994). Given the position of the universities in fostering self-employment among university students, it is hypothesized that:

H2: The role to promote entrepreneurship played by the university increases the self-employment initiative of disabled students.

Mediating Role of Action Mechanisms

Entrepreneurship education and action mechanisms (entrepreneurial intention and knowledge) have a significant relationship. Participation in entrepreneurship education (EE) increases students' intentions to become entrepreneurs and their knowledge of entrepreneurship, and eventually positively influences their decision to venture into business (Gielnik et al., 2015; Tam, 2009; Dell, 2008). Action mechanisms are seen to be stepping stones to self-employment initiatives. Therefore, an increase in action mechanisms will increase students' self-employment initiative (Movahedi & Fathi, 2011; Inegbenebor & Ogunrin, 2010; Pruett, Shinnar, Toney, Llopis, & Fox, 2009). The mediating role of action mechanisms is crucial in the self-employment study. Davidsson (2007) documented that in recent years the strongest theoretical contributions to entrepreneurship research have been made by studies investigating action-related mediators that elucidate the causal mechanisms affecting entrepreneurship. Gielnik et al. (2015) integrated short- and long-term training outcomes to show that action mechanisms (i.e., entrepreneurial goal intentions and action knowledge) have a mediating function linking action-based entrepreneurship training with entrepreneurial action (self-employment). Given this scenario, understanding how action mechanisms mediate the relationship between entrepreneurship education and self-employment accounts for the increase in students' intentions and knowledge as a result of entrepreneurship education (Rauch & Hulsnik, 2015; Souitaris, Zerbinati, & Al-Laham, 2007). To them, entrepreneurship education is more than just educating people to become self-employed. It is about equipping/changing the mind-set of students with knowledge, skills and competencies required for results. It is also a tool that is available to increase an individual's key knowledge and intentions towards self-employment (Souitaris et al., 2007). In addition, entrepreneurship education changes students' intention over time, which, in turn, has a positive impact on their venture-creation decision.

In view of that, when tertiary institutions offer inclusive entrepreneurship education, it will help disabled students in the creation and development of their entrepreneurial intentions and knowledge. So applying the appropriate pedagogy has positive effects on students' intentions and knowledge and eventual self-employment (Premand et al., 2016; Gibcus et al., 2012; Kuratko, 2005; Davidsson & Honig, 2003; Peterman & Kennedy, 2003; McMullan & Gillin, 1998). Therefore, in the present study, an attempt has been made to establish a mediating effect of action mechanisms on the relationship between EE and disabled students' self-employment initiatives. So, the hypotheses and the conceptual framework (Figure 1) of this paper are stated as follows:

H3: Entrepreneurship education is positively related to action mechanisms of disabled students.

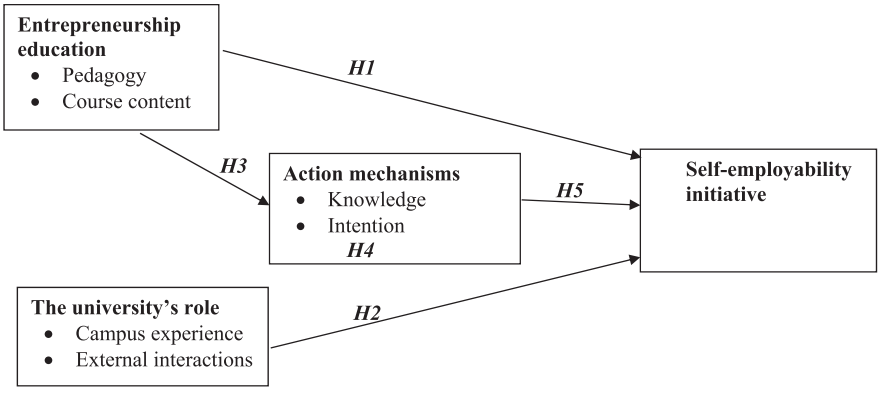

Figure 1. Conceptual model of the study variables.

H4: Action mechanisms significantly mediate the relationship between entrepreneurship education and self-employment initiative of disabled students.

H5: Action mechanisms significantly influence self-employment initiative of disabled students.

METHOD

Research Design

This study adopted a cross-sectional, descriptive research design to examine a model of disabled students' self-employment initiatives in Nigerian universities. An analytical survey with a quantitative method also constituted part the study's research design (Collis & Hussey, 2009). To answer the research hypotheses generated in the literature review section, we undertook a comprehensive survey covering a random sample of disabled students from the three (3) university levels (federal, state and private) across North-Central Nigeria. The institutions in these states were chosen because of the concentration of PWDs pursuing their studies.

Population, sample size and sampling procedure. The study population consisted of 753 disabled students drawn from federal universities (501), state universities (196) and private universities (56) where a sample size of 254 was determined using the Krejcie & Morgan (1970) sample size selection model. This study employed a stratified random sampling technique, in which individual participants were randomly drawn from each stratum (federal, state and private universities). Simple random sampling was then used to select disabled students from each stratum. To obtain responses from the respondents, lecturers were asked to ensure that already selected students completed their questionnaires. This technique was employed to ensure that appropriate elements were drawn from all institutions of the population to reduce sampling error and simultaneously maximize representativeness (Field, 2009; Amin, 2005).

We read out the questionnaires to students with visual impairments, while the other categories filled in the questionnaires issued to them. The researcher thereafter collected some of the questionnaires directly from students, while others were retrieved through their lecturers and class representatives. The data were retrieved at a single

point in time as opposed to a longitudinal study, which has to do with the same sample units of population over a period of time. A total of 223 students out of the targeted sample size of 254 cooperated and responded to the administered questionnaires. The high response rate (87.8%) is linked to fact that a personal method was utilized in the data collection. This approach was employed to aid a face-to-face interaction between the researcher and the respondents, and to improve the quality of the response rate. More so, the researcher maintained useful contacts with the lecturers and class representatives, who were instrumental in identifying the relevant sampled respondents and in maintaining good relationships with them, which yielded excellent response rates.

The sample characteristics reveal that there were more males (171) than females (52), with the majority belonging to the 21–26 age bracket (M = 68.3%; F = 31.7%). On the basis of their disability category, 49.8% of the sample were crippled, 28.2% had visual impairments, 10% had albinism and the rest (12%) had hearing impairments. Of the total same, 58.6% acquired their disabilities (i.e. they were not born with the disability). Finally, the majority of the respondents (91.2%) were single.

Measures. A well-structured questionnaire comprising standardized instruments on entrepreneurship education (EE), university's role (UR), action mechanisms (AM) and self-employment initiatives was distributed among the disabled students for data collection. The questionnaire consisted of statements to which the respondent had to responded on Likert's six-point rating scale, varying from strongly disagree (1) to disagree (2), somewhat disagree (3), somewhat agree (4), agree (5) and strongly agree (6).

Entrepreneurship Education (EE). EE was conceptualized as the provision of knowledge, skills and motivation of students to encourage entrepreneurial success in them and measured in terms of pedagogy and course content. The 11-item EEQ scale proposed by Gibb (2012) and Lanero, Vázquez, Gutiérrez, and García (2011) was utilized for this study. Some of the sample items are: (a) Pedagogy (5 items): 'Lecturers making students write essays about entrepreneurship'; 'Having students develop business plans'; 'Organizing teaching together with entrepreneurs'; 'Enabling students to create their own companies'; 'Having study tours/visits to companies'; (b) Course content (6 items): 'The syllabus emphasizes entrepreneurial actions in business start-up'; 'The course increases my understanding of the attitudes of entrepreneurs'; 'The entrepreneurship course enhances my ability to identify business opportunities'; 'The course places emphasis on how students can develop business plans'; 'The syllabus is about the best method to train entrepreneurial action'; 'The course places emphasis on how students can take business risks'.

University's Role (UR). For university's role, this study utilized a 13-item measure based on a similar measure developed and utilized by Keat, Selvarajah, and Meyer (2011) in a different context which was shown to have good construct validity. The variable of the study had two dimensions. (i) Campus experience (8 items)*:* 'University is an ideal place to learn about starting a business'; 'More entrepreneurship programmes on campus would help students to start businesses'; 'Students are encouraged to pursue entrepreneurship ventures at the university'; 'The university infrastructure discourages entrepreneurship'; 'Students are actively encouraged to pursue their own business ideas'; 'There are no student clubs on campus which

promote entrepreneurship'; 'The university has infrastructure in place to support the start-up of new businesses'; 'The university provides resources to assist student entrepreneurs'. (b) External interactions (5 items): 'The university organizes inter schools quizzes and debates to encourage entrepreneurship'; 'Excursions to companies/entrepreneurship centres are being encouraged by the university'; 'Trade shows/exhibitions are top priorities of the university to help students develop business ideas'; 'Students get to meet foreign entrepreneurs with good ideas for new businesses on campus'; 'Students are mandated to join club on other campuses which promote entrepreneurship'.

Action Mechanisms. The 12-item measures of action mechanisms were based on measures developed by Liñán and Chen (2009), Li and Liu (2011), Gielnik et al. (2015) and Michalos et al. (2009). The variable of study had two dimensions. (i) knowledge (7 items): 'I have the knowledge of how to mobilize funds to create a business'; 'I have the knowledge of how to look for business premises'; 'I have the knowledge of how to source employees'; 'I have the knowledge of how to register a company'; 'I have the knowledge of how to develop a business plan'; 'I have the knowledge of how to advertize my products'; I have the knowledge of how to sel my products'. (ii) Intention (6 items): 'I intend to source employees'; 'I intend to register a company'; 'I intend to develop a business plan'; 'I intend to make the first sale'; 'I intend to mobilize funds in six months' time'; 'I intend to look for business premise in six months' time'.

Self-employment Initiative. Self-employment initiative was conceptualized as discrete of commitment by an individual to earn a living through starting a business. In this regard, it was measured using items developed by Liñán and Chen (2009). Some of the sample items are: 'Seriously considered self-employment as a highly desirable career option'; 'Never thought of self-employment as a career choice'; 'Have the plan of opening a new venture'; 'Won't start a business because I am afraid of failing'; 'Would like someday to start my own business'; 'Could easily pursue a career involving self-employment'; 'If I pursue a career involving self-employment, the chances of failure would be very high'; 'Prefer to work in a big organization rather than a small firm'.

DATA ANALYSIS

The responses to the items of all four study variables elicited from the sample were averaged to yield composite scores of each scale and were used for statistical analysis. Assumptions of normality, linearity of data and homogeneity of variance to explore the data and determine its distribution were tested. As suggested by Tabachnick and Fidell (2007), normality of variables enhances the solution and because the number of factors are determined using statistical inference, multivariate normality is assumed. We assessed normality by skewness and kurtosis. According to Field (2009), the values of kurtosis and skewness should be zero in a normal distribution. Following this rule, the data were found to be fairly normally distributed. Additionally, we tested for the assumption of homogeneity of variance using Levene's test, which returned a non-significant value, making the homogeneity of variance tenable for the data. Furthermore, no indication of severe multicollinearity was dictated in the specifications – the variance inflation factor (VIF) ranged between 1.78 and 2.13 for the study variables.

While a conventional threshold of VIF = 10 may be considered too high, as argued by Cohen et al. (2003), the VIFs in the present study are far below this.

Exploratory Analysis

The principal components analysis for the cleaning of the scales and for testing the dimensionality of the constructs as recommended by Pedhazur and Schmelkin (1991) and Churchill (1979) was applied. To measure sampling adequacy and relevant axes, we employed the Kaiser-Meyer-Olkin test, the Bartlett's test of sphericity and Kaiser's eigenvalues (Evrard, Pras, & Roux, 1993). During the first iteration, we employed a reliability test (α of Cronbach) for each scale. The Cronbach's alpha values for entrepreneurship education, action mechanisms, role model and self-employment initiatives were 0.779, 0.893, 0.813 and 0.891, respectively (see Table 1).

We therefore removed the items with loadings lower than 0.30 on several factors. Complementarily, we examined the communalities (cancellation below 0.4). All the values were found to be in acceptable limits in the present study. Hence, no further treatment of data was required. We then went ahead to validate the measurement model.

Validation of the Measurement Model

Validating the measurement model consisted of a two-step analysis. The first step was a confirmatory factor analysis (CFA) of the measurement model, designed to assess data adjustment to the measurement model, and to define and improve the convergent validity and the discriminatory validity of the constructs (Anderson & Gerbing, 1988). In examining discriminant validity, squared correlations among constructs were compared with the respective AVE. Fornell and Larcker (1981) criteria which suggests that if the squared correlation values among the latent variables are less than the AVE, it is an indication of discriminant validity was used. The results in Table 2 (see Appendix) show that all squared correlations were less than the AVE; hence, concepts studied are different. The second step is the testing of the relationships between the constructs. We used factor loadings and structural covariance analysis by running a confirmatory factor analysis. Also, we employed the use of SEM to assess the relationship between entrepreneurship education and self-employment initiative, to examine the influence of university role on disabled students' self-employment and to see whether action mechanisms mediate the relationship between entrepreneurship education and self-employment initiative.

Confirmatory Factor Analysis

We executed a construct validity test using confirmatory factor analysis, with the aid of AMOS version 22, to assess the extent to which operationalization of a construct does actually measure what the theory purports (Sarantakos, 2005; Anderson & Gerbing, 1998). This step involved specifying separate measurement models for EE, UR, AM and self-employment initiative. CFA is understood as a more flexible statistical tool than other multivariate techniques because it allows for simultaneous multiple dependent relationships between the variables (Holmes-Smith, Coote & Cunningham, 2004).

CFA for Entrepreneurship Education. The measurement scale for EE after the EFA involved eight items. The initial CFA results indicated that although the standardized parameter estimates were all significant ($p < 0.001$), the fit-indices were below the acceptable level, signifying a poor measurement model fit. This informed a re-specification by iteratively deleting items that did not meet the acceptable criteria. The modification indices (MIs) revealed misspecifications associated with 'pdg2′ 'pdg5′ and 'cc1′. Five out of eleven items in total were deleted in the final model prior to further analysis. The retained items were significant and had standardized factor loadings higher than the recommended level of 0.50 thus, preserving the meanings of the factors. The results of the initial estimation of the proposed model were acceptable for a well-fitting model. The measurement model is stated in Table 3 (see Appendix).

CFA for University's Role. The measurement scale for UR after the EFA involved 11 items. The initial CFA results indicated misspecifications associated with 'ce1′, 'ce4′, 'ce6′ and 'ei2′ below the acceptable level, signifying a poor measurement model fit. These were deleted from the model. Concerning the fit of the model, the indicators were adequate. The GFI, TLI and the CFI were all higher than 0.9 (Table 4, see Appendix). Additionally, the RMSEA satisfied the norms of Hu and Bentler (1999).

CFA for Action Mechanisms. The measurement scale for AM after the EFA involved nine items. The initial CFA results indicated that the fit-indices were below the acceptable level, signifying a poor measurement model fit. This informed a re-specification by iteratively deleting 'knw2′ and 'int3′ items that did not meet the acceptable criteria. The retained items were significant and had standardized factor loadings higher than the recommended level of 0.50, thus preserving the meanings of the factors. The results of the initial estimation of the proposed model were acceptable for a well-fitting model. The initial measurement model is as indicated in Table 5 (see Appendix).

CFA for Self-employment. The measurement scale for self-employment after the EFA involved five items. The initial CFA results indicated misspecifications associated with 'se4′ below the acceptable level, signifying a poor measurement model fit. This was deleted from the model. Concerning the fit of the model, the indicators were adequate. The GFI, TLI and the CFI were all higher than 0.9 (Table 6, see Appendix). Additionally, the RMSEA satisfied the norms of Hu and Bentler (1999).

Hypotheses Testing

We have so far established from empirical and theoretical evidence what constitutes self-employment. The hypothesized model (Figure 1) implied testing direct and indirect (mediation) relationships between the study variables. This was done following SEM guidelines for mediation tests as recommended by Baron and Kenny (1986) and Hair et al. (2013), which involved specifying two models, where Model 1 (alternate model) comprising EE, UR AM and SE was treated as direct paths, without considering the action mechanisms mediator variable, while Model 2 included the mediator variable. On examining the accept/reject criteria suggested by Morgan and Hunt (1994), the second (Model 2) provided a better fit based on the model fit statistics ($\chi 2$, df, p value, RMSEA, GFI, AGFI, CFI, NFI) and predictive power as reported

in Table 7 (see Appendix). Therefore, the study hypotheses are tested using the results in Model 2.

The results in Table 7 show that in path Entrepreneurship education → Self-employment (H1) dropped from β = 0.516 to β = 0.376, but remained significant when action mechanisms was introduced in Model 2. Also, University's role →Self-employment (H2), that was originally insignificant in Model 1, became significant with the introduction of the mediating variable (AM) in Model 2. With the exception of gender (which remained insignificant), the other paths were significant and in the hypothesized direction. The sections that follow cover the correlation results and results on the direct and mediation relationships between the composite variables, respectively.

RESULTS

Correlation Results

The correlation results in Table 8 (see Appendix) show a positive and significant relationship between entrepreneurship education and self-employment of disabled students ($r = 0.413$, $p < 0.01$). This can be interpreted as a positive change in entrepreneurship education is associated with a positive change in self-employment initiative. Considering the relationship between the dimension of entrepreneurship education and self-employment initiative, the results reveal that pedagogy is significantly associated with self-employment initiative ($r = 0.353$, $p < 0.01$) and course content is significantly associated with self-employment initiative ($r = 0.736$, $p < 0.05$). Action mechanisms is positively and significantly associated with self-employment initiative ($r = 0.767$, $p < 0.01$). University's role is positively and significantly associated with self-employment initiative ($r = 0.234$, $p < 0.01$) and external experience is positively associated with self-employment initiative ($r = 0.315$, $p < 0.01$), while the relationship between external interaction and self-employment initiative is insignificant ($r = 0.411$, $p > 0.01$). This implies that external interaction is inconsequential in the association with self-employment initiatives in the case of disabled students in the Nigerian universities in this study.

Evaluation of Hypothesized Model

The five (5) hypotheses were tested to examine the influence of EE on self-employment initiative, UR on self-employment initiative and the mediating effect of AM on the relationship between EE and self-employment initiative. The five hypothesized paths were statistically significant. Consistent with H1, a positive relationship was found between EE and SE (β = 0.376, t-value = 5.240, $p < 0.05$). H2 predicted a positive relationship between UR and SE (β = 0.262, t-value = 4.378, $p < 0.05$). H3 was confirmed, noting a positive relationship between EE and AM (β = 0.763, t-value = 19.197, $p < 0.05$). In addition, H5 indicated a positive relationship between AM and SE (β = 0.183, t-value = 3.962, $p < 0.05$).

Testing for the Mediation Effects. For mediation, a path diagram that illustrates the mediational relationship and indicates beta weights is most useful. The statistical significance of the indirect effect should be tested using bootstrapping (Hayes, 2013). Hence, a bootstrap procedure by Preacher and Hayes (2008) was employed to test

for mediation effects in the following hypothesis, and the results are reported in Table 10 (see Appendix)

On testing Hypothesis **H4**, (action mechanism mediates the relationship between Entrepreneurship education and Self-employment initiative), the Baron and Kenny (1986) criteria for mediation were tested first. The results showed that: (i) There was a significant direct effect of entrepreneurship education on self-employment initiative (β = 0.376, S.E = 0.071, t = 5.240), (ii) There was a significant direct effect of entrepreneurship education on action mechanism (β = 0.763, S.E =0.029, t = 19.197), (iii) There was a significant direct effect of action mechanism on self-employment initiative (β = 0.183, S.E = 0.082, t-value = 3.077), (iv) When controlling for action mechanism, the direct effect of entrepreneurship education on self-employment initiative dropped from β = 0.516 to β = 0.376, but remained significant. The results for establishing existence of mediation were met, thus providing support for hypothesis H4. When controlling for action mechanism, the direct effect of entrepreneurship education on self-employment initiative reduced but remained significant, thus confirming a partial mediation effect. This implies that variations in entrepreneurship education affect variations in action mechanisms, which, in turn, partly cause variations in self-employment initiative.

The bootstrap results indicate significant mediation effect of action mechanism on the relationship between entrepreneurship education and self-employment initiative. Further, the standardized indirect effect termed as index of mediation for the indirect effect of action mechanism was 0.27 (95 per cent, CI [0.064, 0.236]). This implies that self-employment initiative receives 27% of the indirect effect from entrepreneurship education through action mechanism, while the remaining 73% is a direct effect. This indicates that entrepreneurship education can directly cause variations in self-employment without the indirect effect through action mechanism.

DISCUSSION

In this study, we investigated the self-employability initiative of disabled Nigerian university students by presenting a model that would allow the concept to be explained and used easily as a framework for working with the students to develop their self-employment careers. This study offers empirical evidence indicating that such factors as entrepreneurship education, action mechanisms and the university's role are consequential in determining the self-employment initiative of disabled Nigerian students.

First, we posited a relationship between entrepreneurship education (EE) and self-employment initiative (SE) variables. The result of testing hypothesis $\mathbf{H_1}$ has established that entrepreneurship education is associated with disabled students' self-employment initiative. The implication is that entrepreneurship education that exposes disabled Nigerian students to life applicable issues relates to boosting their capacity to risk venture start-ups. This is factual in the sense that when entrepreneurship students perceive the knowledge acquired to be useful, their level of commitment to what they are using the knowledge for will make them become more analytical in business start-up decisions. This facilitates them to be alert and then to take advantage of any entrepreneurship opportunities that come their way. Further, a credible explanation for the result could be attributed to the creative atmosphere in the class as well as the emphasis being placed on the course content that inspires the entrepreneurial

mind of disabled students at Nigerian tertiary institutions. This also suggests that the entrepreneurship knowledge gained is useful for entrepreneurial activities. This is consistent with a study conducted by the University of Arizona College of Business (2000) which showed that entrepreneurship education increased the probability of having more graduates who are interested in having new business ventures by 25%. In related studies Zhou et al. (2012), Keat et al. (2011) and Matlay (2008) documented that entrepreneurship education is an effective means of inspiring students' actions towards entrepreneurial careers as well as increasing their venturing rate. Similarly, the Global Education Initiative's (GEI) report by the World Economic Forum (2009) indicated that exposure to entrepreneurship education through an individual's life from youth to adulthood was essential. These findings also provide support for Volery and Mueller's (2006) results that acknowledged the role of entrepreneurship education in influencing an individual's decision to become an entrepreneur. These studies suggest that engaging in entrepreneurial activities is driven by how disabled students appreciate entrepreneurship education.

The results of hypothesis $\mathbf{H_2}$ provide empirical support for the position played by the universities in promoting entrepreneurship (Edwards & Muir 2005; Nurmi & Paasio, 2007). This relationship may be attributable to the increasing demands from students for quality education from universities to equip them with entrepreneurial competencies for future careers. Universities have a crucial role in this lifelong learning journey as they provide unique environments for students to learn about entrepreneurship and to stimulate and support self-employment initiatives (Mahlberg 1996). It is also becoming evident that universities have an important role in supporting the creation of new ventures, both by students and researchers. This support often includes providing premises, enabling access to financing, promotion of the development of networks, and providing access to coaches, mentors and research results. The success of these offerings depends on the close cooperation and integration of university support with the external entrepreneurship support system in the local environment. Hence, it is important for universities to provide an entrepreneurially friendly environment to encourage and foster a self-employment initiative culture.

The results of hypothesis $\mathbf{H_3}$ suggest that entrepreneurship education is associated with action mechanisms. This implies that entrepreneurship education is capable of enhancing disabled students' knowledge and intentions for self-employment initiatives. This means that promoting entrepreneurship education among disabled students will enrich their business knowledge and willingness to launch businesses. This is true because entrepreneurship education not only plays a key role in developing a self-employment initiative culture in society, but also creates the necessary knowledge for starting and growing a business. This also suggests that when disabled students gain knowledge from entrepreneurship programmes, they will develop the intention to start their businesses. Taking this into account, the entrepreneurial future of disabled Nigerian students will depend on the knowledge acquired and their passion to start businesses. Thus, it is necessary to steer students with entrepreneurial knowledge and intentions towards entrepreneurship. The result validates the findings of Gielnik et al. (2015) who established a significant relationship between entrepreneurship education and action mechanisms. Their findings indicated that students who undertook entrepreneurship education acquired the knowledge which triggered their intention of staring a venture. This is consistent with the findings of Tam (2009) and Dell (2008) who established that entrepreneurship education influenced graduates' career paths

in increasing their knowledge to develop intentions of setting up businesses. Further support is provided in a study done in French universities by Tounés (2006), who documented that entrepreneurship education had a significant relationship with action mechanisms in terms of intention and knowledge. The applicability of entrepreneurship education (EE) – action mechanism (AM) debate is in line with Action Regulation Theory (Hacker, 1985; Frese & Zapf, 1994) which emphasizes that when students participate in class, they will acquire knowledge and enhance their intention to start business. With this development, it is contended that the knowledge gained and the intentions developed are anchored in entrepreneurship education. Hence, understanding how entrepreneurship education influences action mechanisms is crucial in a study of this nature. Similarly, the majority of programmes of entrepreneurship conducted are aimed at increasing the awareness and intention of the students as a self-employment career possibility.

The study established a partial mediation effect of action mechanisms on the relationship between entrepreneurship education and self-employment initiative, thus, providing support for hypothesis $\mathbf{H_4}$. This implies that the connection between entrepreneurship education and self-employment initiative is weakened by the presence of action mechanisms, partly acting as conduit. Therefore, entrepreneurship education partly affects self-employment initiatives of disabled students through action mechanisms in the Nigerian tertiary institutions. This finding is in agreement with Gielnik et al. (2015), Tam (2009) and Dell (2008) who found that participation in entrepreneurship education (EE) has positively increased students' intention and knowledge that eventually increased their self-employment initiative. This suggests that action mechanisms are a stepping stone to self-employment, where an increase in the level of action mechanisms increases among disabled students' self-employment initiatives. This is consistent with the finding of Souitaris et al. (2007) that entrepreneurship education is more than just educating people to be self-employed. According to them, it is a tool that creates knowledge and increases intentions towards self-employment. The findings suggest that understanding how action mechanisms mediate the relationship between entrepreneurship education and self-employment initiatives accounts for an increase in students' intentions and knowledge. This links well with the fact that self-employment revolves around disabled students where their intent to act is anchored in the knowledge gained in entrepreneurship lectures. This indicates that by providing entrepreneurship education, tertiary institutions in Nigeria help disabled students in the creation and development of their entrepreneurial knowledge and intentions respectively. Hence, the mediating role of action mechanisms is crucial in the self-employment study. Taking cognizance of this, the theory then offers clear explanations for knowledge acquisition and developing intention through EE by the disabled students that result in self-employment initiative.

The result of testing hypothesis $\mathbf{H_5}$ established that action mechanisms are associated with self-employment initiatives. This means that the more disabled students acquire entrepreneurial knowledge and develop intentions, the more they will become self-employed. This then enables them to focus on creating business opportunities. This result supports the findings of Gielnik et al. (2015) that knowledgeable individuals exhibited better business start-ups (self-employment initiative). Similarly, Pruett et al. (2009) found that the more positive an individual's intention is regarding the outcome of starting a business, the stronger his or her self-employment initiatives. These studies therefore corroborate the relationship between action mechanisms and

self-employment initiatives. The significant relationship between action mechanisms and self-employment initiatives could be attributed to the level of knowledge gained and intention developed by disabled students after undertaking entrepreneurship education. This makes them more alert to opportunities, focused on set goals and able to employ effort in how best to start their businesses. Consequently, disabled students become self-employed when they are sure about their action principles. This assertion is in line with Inegbenebor and Ogunrin (2010) who concluded that Nigerians who acquired entrepreneurship knowledge and had positive intentions created their own jobs (become self-employed). This links appropriately well with the findings of Fiet (2001b) who said that action principles give students direction and show them an optimal approach toward entrepreneurial tasks. This study therefore validates the argument that an individual's action is closely linked to knowledge and intent. Hence, focusing on action mechanisms is important for understanding how to encourage more disabled students to become self-employed. This study also provides support for the assertions of Action Regulation Theory (Hacker, 1985; Frese & Zapf, 1994) which focuses on people's action arising from their goal intention and action knowledge. Based on that, the theory is adopted in this current study to explain how action principles enable disabled students to perform certain tasks (be self-employed).

CONCLUSION AND IMPLICATIONS

In this paper, we explored the self-employability initiatives of disabled university students. The results of the analyses indicate that entrepreneurship education (EE), university role (UR) and the mediating effect of action mechanisms (AM) are statistically significant. These results are expected to have certain implications for universities, students and policymakers alike.

Methodologically, this study focused on a particular population of disabled university students and therefore provided an extensive focus on this population. The study utilized a pure positivistic methodology which benefited the findings on the quantitative front. Bird (2010) showed that there is a measurement challenge to the entrepreneurial values framework. Using the analysis of moments structures (AMOS) and the structural equation model (SEM) this study contributes to overcoming the methodological hitches in self-employment research by developing a measurement model for self-employment initiative.

Theoretically, Action Regulation Theory (ART) is adopted in this study to understand how action mechanisms stimulate disabled students to perform certain tasks. Regarding entrepreneurship, this means that entrepreneurial intention and action knowledge influence self-employment initiative. Specifically, this study demonstrates that entrepreneurship education has a direct association with action mechanisms, action mechanisms are associated with self-employment initiative, and action mechanisms mediate the relationship between entrepreneurship education and self-employment initiative. To this extent, the findings validate the theoretical assertion of ART that factors such as university role and entrepreneurship education are associated with self-employment initiative, while action mechanisms mediate the relationship between entrepreneurship education and self-employment. This has various implications for self-employment initiative. (1) Disabled students should understand the importance of self-employment activities. (2) Studies involving self-employment

initiatives among disabled students should simply investigate the direct role of entrepreneurship education. (3) Nigerian universities and other institutions of learning should pay attention to the knowledge gained and intentions of disabled students in self-employment initiatives.

Practically, this study provides insights into how Nigerian universities can enhance their roles in promoting self-employment initiatives. There is need for them to increase practitioner-student based learning since they are considered the ideal place in shaping entrepreneurial aspirations of students while studying to survive in today's complex business world. Universities should also position themselves as reservoirs of knowledge by making substantial contributions to the development of self-employment initiatives among disabled students. This is because they are seen as seedbeds for teaching students ways to think about becoming self-employed.

Regarding managerial implications, universities are the drivers of an economy's human capital and are expected to have an active role in the development of a country's business and non-business development. This implies that in order to achieve that target, universities in Nigeria ought to consistently review their programmes to suit the needs of disabled students who aspire to be self-employed. In this case, disabled students' self-employment initiatives should be emphasized and, where possible, they should be required to start businesses as part of their self-employment career development strategy. It can work especially if it is rated as a publication for every business one starts.

In terms of policy, the Federal Government directed all tertiary education and regulatory agencies between 2006 and 2007 to put in place policies that promote a self-employment culture among Nigerian youth in an attempt to reverse the graduate unemployment trend. It is disappointing that unemployment among disabled Nigerian graduates is still very high (60%) and this can only be curtailed if academia is adequately facilitated to design and test strategies that can revive the drive towards graduates' self-employment. There is also a need for the government of Nigeria to increase funding for research in entrepreneurship in order to help academia search for different strategies to increase disabled graduates' self-employment initiatives.

Limitations of the Study and Suggestions for Future Research

The study was restricted to universities in North-Central Nigeria. Moving forward, given the limited research on self-employment among persons with disabilities (PWDs) in Nigeria, further work exploring this context is needed, covering other tertiary institutions (polytechnics and colleges of education), to improve our understanding of the experiences of PWDs. In particular, studies that attempt to explore the role of the local context and its constituent factors such as political, religious and social climates on disabled students' self-employment in Nigeria are needed, to better shed more light on self-employment among PWDs. In addition, studies explaining how disabled students' self-employment in Nigerian universities is different from or similar to that of non-disabled students are needed.

This study employed a survey questionnaire to collect the data from sample respondents, which may be problematic for generalization. Follow up interviews which employ a qualitative approach or a mixed model would be of immense benefit. Finally, the present study is cross sectional and views held by individuals may change over the years. This suggests that future studies should employ a longitudinal approach to test the robustness of the model.

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Appendix

Table 1. Factor Analysis for key variables.

Item	Cronbach alpha (α)	Eigen Value	Item	Loading	Communality
Pdg2	***0.81***	***1.603***	Lecturers making students write essays about entrepreneurship	0.873	0.876
pdg3			Having students develop business plans	0.811	0.769
pdg4			Enabling students to create their own companies	0.845	0.764
pdg5			Having study tours/visits to companies	0.766	0.853
cc1	***0.74***	***4.212***	The syllabus emphasizes self-employment in business start-ups	0.766	0.851
cc2			The course increases my understanding of the attitudes of entrepreneurs	0.752	0.833
cc3			Entrepreneurship course enhances my ability to identify business opportunities	0.698	0.795
cc4			The course emphasizes how students can develop business plans	0.756	0.763
ce1	***0.78***	***2.273***	University has infrastructure in place to support the start-up of new businesses	0.591	0.652
ce2			Students are encouraged to pursue their own business ideas	0.804	0.851
ce3			Students are encouraged to pursue entrepreneurship ventures at the university	0.746	0.852
ce4			The university infrastructure discourages entrepreneurship	0.652	0.821
ce5			More entrepreneurship programmes on campus would help students to start businesses	0.873	0.876
ce6			There are no student clubs on campus which promote entrepreneurship	0.811	0.769
ce7			University is an ideal place to learn about starting a business	0.845	0.764
eis1	***0.84***	***1.514***	The university organizes inter-school quizzes and debates to encourage entrepreneurship	0.766	0.853
eis2			Excursions to companies/ entrepreneurship centers are being encouraged by the university	0.766	0.851

(*Continued*)

Table 1. Continued.

Item	Cronbach alpha (α)	Eigen Value	Item	Loading	Communality
eis4			Get to meet foreign entrepreneurs with good ideas for new businesses on campus	0.752	0.833
eis5			Students are mandated to join clubs on other campuses which promote entrepreneurship	0.698	0.795
knw1	***0.81***	***2.771***	I have the knowledge of how to mobilize funds to create a business	0.756	0.763
knw2			I have the knowledge of how to look for business premises	0.856	0.746
knw3			I have the knowledge of how to source employees	0.852	0.591
knw4			I have the knowledge of how to register a company	0.673	0.704
knw5			I have the knowledge of how to develop a business plan	0.866	0.775
int1	***0.94***	***4.268***	I intend to source employees	0.591	0.652
int2			I intend to register a company	0.804	0.851
int3			I intend to develop a business plan	0.685	0.874
int4			I intend to make the first sale	0.646	0.678
se2	***0.89***	***2.223***	Prefer to work in a big organization rather than a small firm	0.652	0.934
se3			Have the plan for opening a new venture	0.852	0.784
se4			Could easily pursue a career involving self-employment	0.746	0.699
se6			Won't start a business because I am afraid of failing	0.812	0.823
se7			Would like someday to start my own business	0.781	0.756

Kaiser Meyer Olkin measure of sampling adequacy = 0.793
Bartlett test for sphericity = 1323.706; df = 57; significance level =.000; % of variance = 65.441

Table 2. Convergent validity and discriminant validity.

	Mean	Std. Dev.	EE	UR	RM	SE
Entrepreneurship education	4.59	0.62	**(0.587)**			
Action mechanism	4.95	0.64	0.338**	**(0.545)**		
University role	5.26	0.53	0.372**	0.310**	**(0.538)**	
Self-employment initiative	5.38	0.47	0.221**	0.075**	0.284**	**(0.623)**

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Table 3. Goodness-of-fit results for entrepreneurship dducation.

Model	$\chi 2$	df	$\chi 2$/df	P	GFI	CFI	TLI	RMSEA	Items deleted
PDG	10.7	8	1.338	.034	.974	.983	.976	.042	2
CC	33.8	14	2.414	.000	.935	.935	.968	.065	1

Table 4. Goodness-of-fit results for university's role.

Model	$\chi 2$	Df	$\chi 2$/df	P	GFI	CFI	TLI	RMSEA	Items deleted
CE	16.2	13	1.246	.001	.969	.973	.956	.024	3
EIs	35.4	23	1.539	.064	.971	.957	.984	.033	1

Table 5. Goodness-of-fit results for role models.

Model	$\chi 2$	df	$\chi 2$/df	P	GFI	CFI	TLI	RMSEA	Items deleted
KNW	18.9	8	2.363	.051	.982	.968	.972	.06	1
INT	22.4	12	1.867	.014	.949	.957	.967	.035	1

Table 6. Goodness-of-fit results for self-employment initiative.

Model	$\chi 2$	df	$\chi 2$/df	p	GFI	CFI	TLI	RMSEA	Items deleted
SE	10.234	6	1.706	.032	.982	.956	.912	.061	1

Table 7. Structural model results for competing models.

Model elements	Model 1 (without mediator variable)	Model 2 (With mediator variable)
Model fit		
CMIN(χ2)	23.113	8.236
Df	5	3
P value	.000	.041
CMIN/df	4.612	2.745
GFI	.821	.990
AGFI	.567	.929
NFI	.743	.990
TLI	.804	.968
CFI	.656	.994
RMSEA	.513	.046
Standardized parameter estimates		
AM <— EE		.763***
SE <— EE	.516***	.376***
SE <— UR	.254	.262***
SE <— AM	.184***	.183***
% of significant path	65%	65%

Table 8. Correlation analysis.

	1	2	3	4	5	6	7	8	9	10
Entrepreneurship education	1.000									
Pedagogy	.269*	1.000								
Course Content	.211	.517**	1.000							
Action mechanism	.220	.485**	.631**	1.000						
Knowledge	.303**	.174	.278*	.496**	1.00					
Intention	.430**	.475**	.379**	.496**	.189**	1.000				
University role	.152**	.349**	.111**	.234	.442**	.631**	1.00			
Campus experience	.350**	.234**	.615**	.311*	.125**	.631**	.365*	1.00		
External interaction	.350**	.296**	.136**	.231*	.433**	.211**	.165**	.243**	1.00	
Self-employment initiative	.413**	.353**	.736*	.767**	.771**	.598**	.234**	.315**	.411	1.00

*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

Table 9. Regression results on direct paths.

				B	S.E.	B	t-Value	P	Decision
H1	SE	<—	EE	0.373	0.071	0.376	5.240	***	Yes
H2	SE	<—	UR	0.259	0.059	0.262	4.378	***	Yes
H3	AM	<—	EE	0.549	0.029	0.763	19.197	***	Yes
H5	SE	<—	AM	0.221	0.056	0.183	3.962	***	Yes

Table 10. Total, direct and indirect effects (Beta coefficients).

Standardized total effects	Gender	Entrepreneurship education	Action mechanism
Action mechanism	0.000	0.763**	0.000
Self-employment initiative	−0.009	0.516**	0.183*
Standardized direct effects			
Action mechanism	0.000	0.763**	0.000
Self-employment initiative	−0.009	0.376**	0.183*
Standardized indirect effects			
Action mechanism	0.000	0.000	0.000
Self-employment initiative	0.000	0.140*	0.000

Bootstrap mediation results

Path			Point estimate	S.E	Lower bounds	Upper bounds	P	z-value
Self-employment initiative	←	Entrepreneurial education	0.140	0.059	0.046	0.236	0.016	2.373