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How Quality of Supervision Moderates the Relationship between Student Teachers' Preparation for and Performance in School Practice

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Abstract This quantitative cross-sectional survey examined the moderation effect of the quality of supervision on the adequacy of preparation for SP - performance in SP among 184 (98 second year and 84 third year) student teachers at Busitema University. Findings revealed high adequacy of preparation (M = 103.02, SD = 13.17), high quality of supervision (M = 37.13, SD = 6.19), and high level of performance (M = 43.16, SD = 4.75) in SP. The quality of supervision was a significant moderator of the preparation—performance link, R^2 = .0136, F (7, 176) = 3.767, b = .006, t (176) = - 1.941, p = .05. The findings imply need for tagging SP preparation and supervision to student teachers' performance.

Keywords: *school practice, quality of teaching, instructional supervision, moderation effect, teacher trainee*

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1. Introduction

The education system of a given society is arguably the most significant as well as most effective social institution that influences a human being to act in a certain way [1]. Durkheim [2] asserts that the education system works as a "methodological socialization of the younger generation." Education in the twenty-first century is expected to prepare learners to address the challenges of the rapid pace of economic, social, environmental, and technological change being experienced in the world. Kjellin and colleagues assert that it is through the education system a human being learns, acquires and communicates the norms, values, attitudes, skills, and knowledge necessary to work and function in a social context.

Education systems and educators therefore have a responsibility to adapt and assist learners to face these challenges by incorporating a broad range of skills and competencies necessary for learners to successfully navigate the changing global landscape. The learners need to be taught to use and apply the knowledge and skills they gain from the school system to become productive and integral members of society. In this respect, the traditional approaches to teaching and learning being perpetrated by old-fashioned teacher education approaches need to be replaced by 'modern' approaches; the kind that foster a holistic learning environment and aids learners to address real life challenges.

Teacher education institutions thus need to foster competencies, skills, values and practices such as critical thinking, creativity, communication, respect for diversity, adaptability, entrepreneurship and innovation in the training and supervision of upcoming teachers. As noted by Education for All [3], teacher education is a critical factor in the achievement of Education for All (EFA) which emphasizes the acquisition of the 'transversal competencies' or 'twenty-first century skills' also referred to as 'non-cognitive skills' and 'non-academic skills'. Schools are now situated in rapidly changing contexts of multiculturalism, higher levels of moral pluralism than ever before, and yet increasing individuality, which raises questions of authenticity and hence relevance of the trainings based on own historical experiences [1].

Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes, especially through shaping learners' learning environments and influencing learner motivation and achievement. Therefore, the teacher education process, particularly school practice (SP), plays a central role in the preparation/formation of pre-service teachers. One to qualify and be registered as a teacher must inevitably demonstrate a favorable performance in school practice. Traditionally, the supervisor of teacher trainees during

school practice is a university or college lecturer who instructs the teacher trainees. A lot of reforms have infiltrated teacher education including the constructivist approach in which students are taken as active participants in their own education. Student teachers need to be fully engaged in their own learning not only in order to grasp the content well but also to fruitfully reflect and contribute their own experiences to their own maturation as teachers.

Apolot, Otaala, Kamanyire, and Komakech [4] note that although SP is an integral part of teacher education programs in universities in Uganda, the practice is bedeviled with many challenges ranging from poor facilitation of both students and supervisors, lack of respect for student teachers by lecturers and vice versa. Student teachers have also become victims of challenges faced by host schools. This consequently affects the quality of teaching and learning during school practice in the host schools. In addition, school practice has remained predominantly teacher-centred, with minimum student agency owing to the fact that the students are prepared for SP from lecturers' point of view regardless of how the students view these preparations they are given. It is commonplace to find that the lecturers who train the students are experts in their narrow fields of specialization in higher education, and not the level they train the students to teach (secondary or primary school teaching). Moreover, the lecturers base their supervision of the SP process on their own previous experiences either during their own SP or from what they heard from others' experiences with minimum or lack of awareness about the changing trends of administrative and academic in the contemporary secondary schools.

This paper argues that the quality of school practice supervision is a critical factor in the performance of teacher trainees which further influences the general performance of learners under their tutelage [5]. The quality of SP supervision is therefore hypothesized to moderate the link between the preparation for school practice and the student teachers' performance in the process. Studies have shown that the extent to which the activities of students match the goals of training will partly depend on the level and type of cooperation between training institutions and host or practice schools [6,7,8]. Apolot *et al*. [4] found a significant positive relationship between school practice supervision and student teacher performance in higher institutions of learning in Uganda. It is therefore clear that practical training of student teachers is a factor in the tension between theory and practice.

Given the disconnect between the reality principle on which the administrators base their supervision and the theoretical stance the lecturers base on, it is difficult and confusing for the SP students to locate the middle ground. This study sought to examine the perceived adequacy of preparation, supervision quality, and self-rated performance in SP among second year and third year students at Busitema University. Ultimately, the study assessed the moderating effect of the quality of supervision on the relationship between the level of preparation and level of performance in school practice among students of Busitema University in Uganda.

2. Review of Related Literature

Mortimore [9] posits effective learning as one of the major outcomes of schooling. To ascertain effective learning, the quality of teaching has to be guaranteed, particularly starting from teacher training level, more specifically during school practice. This is often achieved through effective school practice supervision. Stephen [10] defines supervision as a distinct professional activity in which education and training aim at developing science-informed practice which is facilitated through a collaborative interpersonal process. It involves observation, facilitation of supervisee self-assessment, evaluation, feedback and the acquisition of knowledge, and skills by instruction, modeling and mutual problem solving. Akitunde [11] similarly views supervision as an act of overseeing people or watching over a particular task being carried out correctly by other people.

Okumbe [12] identifies two strands of supervision: general supervision and instructional supervision. General supervision encompasses activities that take place mainly outside the classroom, while instructional supervision entails those activities taking place in the classroom in order to improve teaching and learning, making it more result oriented for the learners [13]. In this study, our emphasis was on the quality of instructional supervision of school practice, forerun by the adequacy of preparation for it, and expected to cause high performance.

2.1. Preparation for School Practice

Apolot *et al*. [4] maintain that if there is any dissatisfaction or satisfaction with the quality of teacher graduates, the training institutions are among the first to be blamed or praised for teacher quality and ultimately the quality of education in a country. A study by Komakech [14] reports that very small difference exists between trained and untrained teachers in terms of preparation for teaching and classroom practice. In the same study it is noted that whereas private schools employ more untrained teachers compared to public schools, the performance of the private schools is far better than that of public schools in Uganda. Such a finding faults the quality of training for teaching; a trained teacher is expected to outperform his or her untrained counterpart. This therefore, raises several questions regarding the quality of formal training of teachers, effectiveness of the training, and congruence and relevance of the training with reference to the needs of the schools the teachers are due to serve in.

Many studies [14,15] claim that students who join teacher education programs do not measure up to the training demands of the courses. This implies that in line with the computer adage ''garbage in, garbage out,'' there is no wonder the quality of teachers and hence performance of learners is wanting. This is further attested to by Okurut et al. [15] who observes that the performance of teachers graduating from institutions of higher learning is still poor. Okurut et al. [15] also maintains that the academic and professional training student teachers obtained from universities and other training institutions may not be sufficient to equip them as graduates with the necessary skills, attitudes and knowledge to be effective

in their classrooms. This wields a double tragedy to the preparation phase of teacher education: poor quality inputs (students, inadequate teaching materials/ infrastructure) subjected to poor quality processes (poor training, traditional teaching methods) yields poor quality outputs (teachers), and hence maintains poor learner academic performance in schools.

However, contrary to Okurut and colleagues' argument that institutions offer poor quality training to teacher trainees, which implies that facilities for this process are inadequate, Otaala *et al.* [16] as well as Komakech [17] report that there is a heavy investment in teacher training programs by universities and teacher education institutions in Uganda. However, the authors all decry the poor quality of teacher graduates leaving the institutions. Lilian [18] argues that unless teachers perceive supervision as a process of promoting professional growth and student learning, the supervisory exercise will not have the desired effect of improving the quality of teachers.

2.2. School Practice Supervision

Supervision of classroom instruction and continuous support to teachers are some of the most effective ways to improve and sustain the quality of instruction [19]. Supervision plays a key role in quality assurance and service delivery of education offered in the educational institutions in Uganda. According to Beach and Reinhartz [20], supervision is a strategy in which professional support is provided to improve instruction. Hence it should be developed collaboratively by competent supervisors, teachers, and other members of the school community.

According to Oyedeji [21], the standard of education and performance of student teachers can be improved if supervision of student teachers is properly done by university supervisors during training. Instructional supervision, according to Figueroa [22], ought to be a formative process that elicits professional development and improvement of instruction. Supervision of instruction is therefore expected to involve motivating of the teacher to explore new instructional strategies. As pointed out by Beach and Reinhartz [20] supervision is a strategy in which professional support is offered to the teacher trainee; it is incumbent upon the supervisors to support and make the student teachers realise the whole exercise of supervision is to support them in their efforts to acquire pedagogical skills. This implies that supervisors of school practice have the responsibility of making the student teachers aware of the educational goals and standards to be implemented. The supervisors should provide feedback and appropriate resources for the teacher trainees to utilize for effective teaching. Effective supervision should be felt in the academic growth and development of the student teacher and reciprocally the learners under him or her. It implies that quality supervision is expected to guide curriculum content and instructional materials selection that will facilitate first the student teachers' and next their learners' academic growth and development.

According to Glickman and colleagues [23], supervisors should help supervisees to realize their potentials and usefulness. In this case the school practice supervisor should help the student teacher prior to the lesson to establish their frame of mind as well as the context of the lesson, before sitting in the whole length of the lesson to observe the teacher's work. Later, the supervisor and the student teacher should sit to discuss the teaching process, emphasizing the strengths, challenges, opportunities, and areas for improvement with regard to the preparation, progress, conclusion, and future of the lesson. Implicitly, the supervision process should offer both the student teacher and the supervisor the opportunity to work together to improve learners' performance through enhancing the pedagogical skills and competencies of the student teacher [14,24].

In other words, quality supervision should fosteran amicable relationship between the supervisor and the student teacher. However, observations during the authors' own school practice monitoring exercises have indicated some degree of poor quality school practice supervisor-student teacher rapport. This observation resonates with findings by Marshall [25] that the process by which most student teachers are supervised and evaluated is inefficient, ineffective, and is poorly used. This implies that, as opposed to the advocacy by Apolot and colleagues [4], the supervision environment does not elicit confidence, trust, love, and dedication to duty by the student teacher. As advanced by Apolot and colleagues, the chief reason for the poor supervisor--supervisee relations is inadequate training of the supervisors in pedagogy and administration of teacher education.

2.3. Students' Performance in School Practice

Apolot *et al.* [4] claim that the performance of novice teachers graduating from Ugandan universities has been declining over the years. This claim is confirmed by a UNEB report cited in [17] that many teachers in Uganda lack competencies to teach effectively and assess learners, including setting and marking tests. The UNEB report goes ahead to claim that many teachers have inadequate content knowledge and lack the ability to interpret concepts. This implies that regardless of how highly or lowly student teachers perform during school practice, their ultimate performance is reflected in their long-term performance, especially the academic performance of their learners.

Sisil [26] argues that school practice supervisors are responsible for improving and maintaining teaching and learning standards of student teachers in school. The supervisor should offer support supervision in guiding the student teachers as they perform their duties of lesson planning, preparation of schemes of work, and related classroom practices including record keeping and assessment. The student teachers' performance in these activities contribute to their own performance and later in the improved academic performance of their learners.

According to Mulford [27], the poor performance of student teachers is attributable to not being made aware, during school practice, of the necessity for a teacher to be able to talk about, to value and to reflect in a dialogue with the students so that the necessary conditions are created for them to learn. In such a case, the student teachers and later novice teachers are more often

than not unable to deal with a number of critical issues including ethical dilemmas that arise during their practice. This study was therefore purposed to examine how the quality of instructional supervision of school practice influences the link between the adequacy of preparation and self-reported performance of Busitema University SP student teachers of the 2018/2019 academic year.

2.4. Contextualizing the Problem

Since its establishment in 2007, the Faculty of Science and Education, Busitema University, has graduated over a thousand teachers of science subjects. Despite the heavy investment in teacher training programs by the University, the level of performance in school practice has remained largely undocumented. Although a number of contributory factors to poor learner performance have been identified not different from what Apolot *et al.* [4] observed, inadequate student teacher supervision during school practice is one of the most likely factors that results in graduation of underprepared teachers that cannot adequately help their learners to pass. This therefore leads to questions such as; how adequate was the preparation, supervision and feedback to the student teacher at the end of school practice? Were the teachers properly supervised and mentored during their training? How does the quality of supervision influence the relationship between the level of preparation and performance in school practice? This study therefore sought to examine the student teachers' perception on preparation, supervision, and their own performance during school practice in the 2019 school practice.

3. Methodology

The study was quantitative in approach and employed a cross-sectional survey design. Quantitative data on the adequacy of preparation, quality of supervision, and self-performance were collected from two cohorts of school practice students (N = 184), Year 2 (n = 98) and Year 3 (n = 86), 2018/2019 academic year. The Research Advisors Table [29] based on Krejcie and Morgan's 1970 Table of Sample selection was used for sample size determination for the quantitative survey. The participants were selected by simple random sampling technique and accessed as they reported from school practice. The data were intentionally collected at the end of the exercise so as to avoid possible biases during the exercise.

A questionnaire was used for data collection. The questionnaire was composed of a number of sections. One section solicited demographic information on the characteristics of the students including their age, sex, and year of study. The participants selected the appropriate response in each case. Other sections for measuring the quality of preparation, quality of supervision, and level of performance of the participants were composed of 25, 9, and 10 items respectively scored on a 6-point Likert scale, 1 (*never*) to 5 (*strongly agree*). The scale that gauged the adequacy of preparation for school practice had a Cronbach alpha reliability coefficient of .909, the one for the quality of SP supervision had a Cronbach alpha reliability coefficient of .867, while the one for the self-rated performance had a Cronbach alpha reliability coefficient of .785.

Data were entered in SPSS software and transformed to generate sums of scores for each scale. The total score of adequacy of preparation for SP scale ranged from zero to 125. The scores were interpreted as low adequacy (0-41), moderate adequacy (42-83), and high adequacy (84-125). The quality of supervision scores ranged from zero to 45 and were interpreted as low quality (0-15), moderate quality (16-30), and high (31-45). The level of performance scores ranged from zero to 50 and were interpreted as low (0-16), moderate (17-33), and high (34-50). The data were then tested for normality and Pearson product moment correlation coefficients determined before running the moderation equation using the *Process* 3.1 plugin.

4. Results

The participants were of diverse backgrounds; in terms of gender, age ranges, years of study, marital statuses, regions of origin and residence, prior educational qualifications already attained, preferences for teaching job, and years spent on the course. These demographic information are presented in Table 1.

Table 1

Characteristic	Category	Frequency	Percent
Sex	Male	140	76.1
	Female	44	23.9
Age range	18 - 24	147	79.9
	25 - 30	35	19.0
	31 - 35	1	.5
	36 and above	1	.5
Year of study	II	98	53.3
	III	86	46.7
Civil status	Married	6	3.3
	Widowed	1	.5
	Single	174	94.6
	Cohabiting	3	1.6
Region of origin/residence	North	8	4.3
	East	144	78.3
	Central	19	10.3
	West	13	7.1
Prior educational qualification	A level certificate	157	85.3
	Diploma	1	.5
	Bachelor's Degree	26	14.1
Preference of teaching job	First	105	57.1
	Second	47	25.5
	Third	16	8.7
	Fourth	7	3.8
	Fifth	4	2.2
	Sixth	5	2.7
Years spent on course	Two	95	51.6
	Three	78	42.4
	Four	8	4.3
	Five	3	1.6

Analysis of the data revealed that the adequacy of preparation for school practice was rated as highly

adequate (M = 103.02, SD = 13.17), the quality of supervision as high quality (M = 37.13, SD = 6.19), and the self-rated level of performance as generally high (M = 43.16, SD = 4.75). These results imply that school practice at Busitema University is given the due attention and management it deserves.

There was generally a statistically significant positive correlation between adequacy of preparation and level of performance in school practice (r = .513, p < .05), adequacy of preparation and quality of supervision (r = .494, p < .05), and quality of supervision and level of performance (r = .492, p < .05). These correlations indicate that performance in school practice is a function of the adequacy of preparation and the quality of supervision among other factors.

A moderation equation (Model 1) was run using *Process 3.1* plugin to test the hypothesis that the quality of school practice supervision is a significant moderator (W) of the relationship between adequacy of preparation for school practice (X) and the students' self-rated performance in school practice; with gender, age, year of study, and marital status as covariates. The overall model was significant, R^2 = .366, F (7, 176) = 14.512, p < .001.

The regression of performance on adequacy of preparation (path c) was significant, *b* = .33, *t* (176) = 3.196, *p* = .0017,implying that for every unit increase in preparation, the student teacher's performance in school practice would increase by .33 units. Similarly, quality of supervision significantly predicted performance in school practice (path b), *b* = .7949, *t* (176) = 2.7122, *p* = .0073; meaning that a student would exhibit a .7949 unit increase in SP performance for every unit increase in quality of supervision. However, the interaction effect between the two predictors was just moderately statistically significant, R^2 = .0136, F (7, 176) = 3.767, *b* = .0056, *t* (176) = - 1.9408, *p* = .0539.

When the level of quality of supervision was low, every unit increase in the adequacy of preparation resulted in a .1548 unit increase in SP performance, *b* = .1548, *t* (176) = 5.7353, *p* < .01. At a moderate level of quality of supervision, the effect of adequacy of preparation on the student teachers' performance in school practice was slightly lower, *b* = .1214, *t* (176) = 4.5754, *p* < .01. While at a high level of moderation, every unit increase in adequacy of preparation gave a much lower unit increase in the students' performance in school practice, *b* = .0881, *t* (176) = 2.4702, *p* = .0145.

The Johnson-Neyman significance region ranged between supervision quality scores of 13.00, *b* = .2605, *t* (176) = 3.7978, *p* = .0002 and 45.00, *b* = .0825, *t* (176) = 2.1873, *p* = .0300 within which the relationship between adequacy of preparation and performance in school practice became less positive. This implies that for students who perceived the adequacy of preparation to be low, a higher quality of supervision was required to enhance their performance, and vice versa. The moderation effect is presented in Figure 1.

From Figure 1, it is clear that quality supervision is generally a prerequisite to enhance the preparation—performance link. However, higher levels of quality supervision are required at lower levels than at higher levels of preparation and performance.

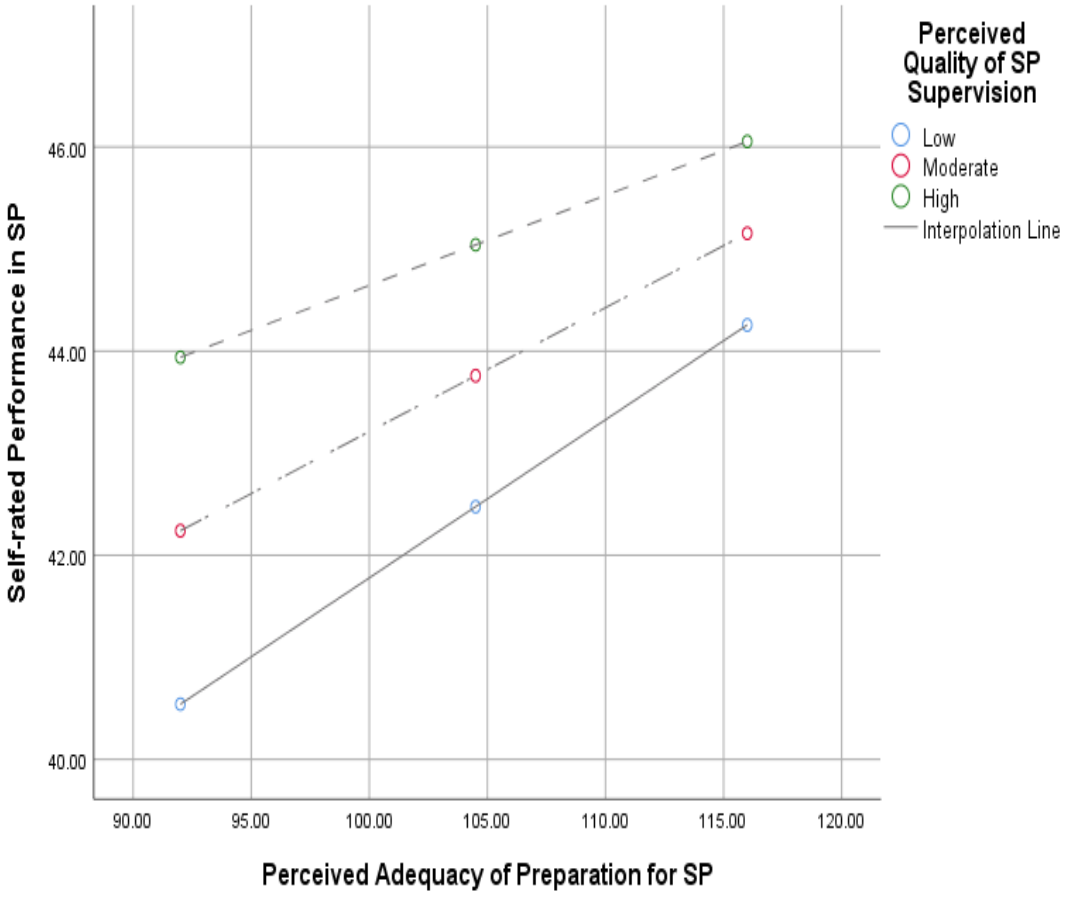

Figure 1.

5. Discussion

The levels of adequacy of preparation, quality of supervision, and self-rated performance in school practice were generally high. These findings indicate that Busitema University accords the desired levels of preparation and supervision of SP. This is in contrast to the argument of Otaala and colleagues [16], that universities and teacher education institutions in Uganda contribute to the poor quality of teachers. Instead, as observed by Henry and Beasley in [29], Busitema University seems to recognize the importance of supervision of student teachers during SP. It therefore implies that factors other than the adequacy of preparation and quality of supervision are responsible for lowering the quality of teachers produced by Busitema University. As alluded to by Komakech, Education for All, and Okurut et al. [14,15], students joining teacher education programs do not measure up to the training demands of the courses, implying that indeed there are a host of other factors that affect the quality and performance of teachers than factors related to preparation and supervision.

The relationships between preparation for SP, quality of supervision, and level of performance were positive and statistically significant. As noted by Lilian [18], the positive correlations imply that the student teachers perceived their preparation and supervision as a process of promoting professional growth and student learning; hence the supervisory exercise had desired effect of improving the performance of the student teachers. The findings further agree with Otaala et al.'s report that there is a heavy investment in teacher training programs by universities and teacher education institutions in Uganda.

The results show that the quality of school practice supervision is a significant moderator of the relationship between adequacy of preparation for school practice and the students' self-rated performance in school practice when gender, age, year of study, and marital status are controlled for. The moderation equation indicated that for every unit increase in the adequacy of preparation, the student teachers' performance in school practice increased. At higher levels of quality of supervision, the student teachers exhibited much higher performance in school. This implies that quality supervision is generally a prerequisite to enhancing the effect of preparation on the performance in school practice among the Busitema University SP students. Conversely, poor supervision diminishes the effect of preparation and performance in SP.

This result agrees with Apolot et al.'s [4] proposition that good quality supervision builds on the recognition of the strengths and talents of the supervisee in addition to encouraging their self-efficacy. According to Okumbe [12], school practice supervision improves a student teacher's classroom practice and academic performance. Sergiovanni and Starratt [30] argue that high quality supervision of instruction has the potential to improve classroom practices and provide teachers with opportunities for professional growth and improvement. To the contrary, poor quality supervision causes discouragement and poor motivation and hence poor performance among teachers. All this confirms the critical role of quality of school practice supervision in the professional growth and development of the teacher [22,31,32,33].

6. Conclusion

The study has shown that adequacy of preparation for school practice and quality of school practice supervision are critical factors in the performance, and by extension formation, of SP student teachers. This therefore means that good leadership and supervision skills are key to enhancing the quality of teachers. The university and college administrators or lecturers should plan, develop effective and current strategies for school practice supervision and management. Other factors that negatively affect the moderation effect of Supervision on performance should be meticulously identified and minimized.

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