

Instructional Supervision and the Pedagogical Practices of Secondary School Teachers in Uganda

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Abstract

This paper looks at the effect of instructional supervision by school authorities on the pedagogical practices of teachers in public secondary schools in Uganda. To date, research into this field in the country has focused more on the technicalities of supervision rather than on how the teachers have been responding to it. The study employed a descriptive cross-sectional survey design, in which both quantitative and qualitative methods of data collection and analysis were applied. Study respondents included 934 teachers randomly selected from 95 public secondary schools, 76 head teachers, and two officials from the Directorate of Education Standards of the Ministry of Education and Sports. Ordered logistic regression technique was used to establish the effect of instructional supervision on the pedagogical practices of teachers. Findings of the study revealed that both classroom observation (odd ratio=4.1; $p=0.000<0.05$) and portfolio supervision (odd ratio=2.3; $p=0.000<0.05$) have statistically significant effect on the pedagogical practices of teachers in public secondary schools in Uganda. Furthermore, the study established that school authorities were inadequately carrying out instructional supervision, thereby leaving teachers to employ ineffective pedagogical practices. The study concluded that teachers' pedagogical practices are dependent on the manner in which they are supervised, other factor notwithstanding. Therefore, in order to augment the pedagogical practices of teachers, school inspection by the Directorate of Education Standards should be increased and regular in-service training needs to be provided to head teachers as well as subject heads on how to conduct classroom observations and portfolio supervision in schools.

Keywords: Instructional supervision, classroom observations, portfolio supervision, pedagogical practices

1. Introduction

World over, highly effective teaching has been proven to improve student (or pupil) learning. However, the kind of pedagogical practices teachers employ determine how successful students can learn, other factors notwithstanding. In practice, however, many teachers often utilise professional practices that dampen the chances of students to effectively learn. This kind of scenario may not be different with what is happening amongst public secondary school teachers in Uganda. Yet, effective school supervision could encourage teachers to apply more robust and effective pedagogical practices that have been devised over the years. In this study, the researchers delved into the effect of instructional supervision by school authorities on the pedagogical practices of teachers in public secondary schools in Uganda. The study was instigated by the persistent complaints from different stakeholders about the deteriorating performance of students in many public secondary schools in the country which they attribute to poor teaching. In this section, the authors present the background to the study, statement of the problem, and the study objectives.

Historically, Uganda has been well known in the East African region for producing good quality teachers (Ssekamwa & Lugumba, 2010). This has been attributed to the strong higher education sector that the country has been having since the founding of Makerere University in 1922. In the early 1980s, the training of secondary school teachers in the country was expanded through the establishment of 10 national teachers' colleges (NTCs) and later the founding of more public and private universities and teacher training institutions that significantly contributed to the production of more trained teachers in the country. However, there is now evidence that the way teachers in public secondary schools in Uganda are teaching does not conform to the standards set by the National Curriculum Development Centre [NCDC] and the Directorate of Education Standards [DES] (Uganda National Examination Board [UNEB], 2015). Available records show that many teachers in secondary schools in Uganda hardly prepare schemes of work and lesson plans; and neither do they conduct sufficient practical lessons or give time for remedial classes for academically weak students (Ministry of Education & Sports [MoES], 2014a). These kinds of pedagogical practices are believed to be responsible for the poor performance of many students in the national examinations - year after year (UNEB, 2015). Yet, the teachers are supervised by school authorities during their course of duty. This prompted the researchers to ask: "What effect does instructional supervision by school authorities have on the pedagogical practices of teachers in public secondary schools in Uganda?" This study was an attempt to answer this question.

The study was anchored on McGregor's theory X and theory Y. The theories stipulate that the way a manager treats his or her subordinates, depends on his or her assumptions about their behaviour. McGregor (1960) says that a theory X manager assumes that an average person dislikes work, and attempts to avoid it; has no ambition, wants no responsibility, and would rather follow than lead in work situations. Because of that,

workers need to be closely supervised and controlled. On the other hand, McGregor (1960) contends that a theory Y manager assumes that an average person likes to work naturally - just like to play; is willing to take responsibility; and is committed to work goals without being directed or forced to do so. Because of these assumptions, a theory Y manager believes that subordinates do not necessarily need to be closely supervised, monitored or forced to do what they are meant to do at work. In this study, the researchers hypothesized that the way teachers in public secondary schools in Uganda are supervised, is dependent on the assumptions school administrators hold towards the teacher's behaviours. School authorities who assume that teachers are lazy, dislike work, unintelligent, and are set to avoid responsibility, tend to strictly control, supervise, and monitor teachers. Whereas administrators who believe that teachers like work, are intelligent, and willing to take up responsibility, tend to be less strict in controlling and supervising subordinates. The researchers thus hypothesised that the teachers' pedagogical practices would depend on the way they are supervised, other factors notwithstanding.

The study focused on two main concepts: instructional supervision and pedagogical practices. According to Tesfaw and Hofman (2014), instructional supervision is the supervision carried out by the head teacher, subject heads, and other assigned supervisors in a school with the aim of providing guidance and support to teachers. Zepeda (2010) on the other hand looks at instructional supervision as the continuous monitoring of classroom teaching with the aim of not only promoting professional practices, but also to enhance professional development in a collegial and collaborative style. In fact, Zepeda (2010) states that instructional supervision occurs in two main ways, namely: classroom observations (formal and informal) and portfolio supervision. Formal observations according to Cogan (1973), occurs when a school head teacher or any other administrator sits in the classroom to conduct lesson observations. Such observations start with the supervisor holding a pre-observation conference with the teacher before the actual lesson observation occurs; and later, end with a post-observation conference. Informal classroom observation meanwhile occurs when the head teacher or any other administrator makes a short visit to class when the teacher is conducting a lesson and such visits are intended not necessarily to evaluate the teacher but rather to gather information on the curricular and the teacher's pedagogical practices (Downey, Steffy, English, Frase, & Poston, 2004). Portfolio supervision on the other hand refers to the review of the teacher's artifacts such as the teacher's statement of belief on teaching, sample lesson plans, results of tests, schemes of work, samples of student work, career goals, journals, and such things like lesson notes (Zepeda, 2010). In this study, the researchers borrowed the definition of instructional supervision from Zepeda whereby instructional supervision was characterized by classroom observations and portfolio supervision.

The dependent variable in this study was pedagogical practices. According to Lakkala, Ilomäki and Kantosalo (2011), pedagogical practices refer to the various types of tasks, ways of working or types of activities and practices, which guide effective teaching and learning. Such practices Lakkala *et al.* say include among others: preparing well in advance relevant schemes of work, lesson plans, lesson notes, and teaching aids; prompt setting of written and practical exercises; prompt and careful evaluation of all written and practical exercise; provision of feedback to learners on assessments, and undertaking of remedial teaching to ensure effective learning. In this study, the researchers borrowed the definition of pedagogical practices from Lakkala *et al.* (2011); thus, pedagogical practices were characterized by whether a teacher makes schemes of work, draws lesson plans, and so on and so forth.

1.1 Statement of the Problem

Trained teachers are expected to apply sound pedagogical practices whenever and wherever they work. However, many teachers working in public secondary schools in Uganda appear to be applying ineffective pedagogically practices that are reportedly already hurting the learning processes of many students in the country. According to MoES (2014b; 2015) and UNEB (2014; 2015), most teachers in secondary schools in Uganda hardly use the recommended learner-centred pedagogies and neither do they regularly conduct practical lessons nor carryout effective student assessments and systematic scheming of their work as well as lesson planning. These practices, UNEB (2015) points out, are already causing many candidates to perform poorly in the national Uganda Certificate of Education (UCE) and Uganda Advanced Certificate of Education (UACE) examinations. Yet, the Directorate Education Standards (DES) of the Ministry of Education and Sports and the local school authorities are there to supervise the teachers in their work – something Musaaazi (2006) argues is designed to improve the pedagogical practices of teachers. If the current scenario persists, dropout and failure rates in secondary schools are likely to increase; subsequently, resulting into wastage of resources devoted to education and the under-development of the country's human resources. Therefore, the researchers felt that there was a need to investigate how instructional supervision by school authorities was affecting the pedagogical practices of teachers working in public secondary schools in Uganda since Government is making a lot of investments in the sector.

1.2 Study Objectives

This study was aimed at investigating the effect of instructional supervision by local school authorities on the pedagogical practices of teachers. Specifically, the researchers targeted at: (a) determining the effect of classroom observation; and (b) portfolio supervision on the pedagogical practices of public secondary school teachers in Uganda.

2. Literature review

Several scholars have taken interest in analysing the relationship between supervision and teacher pedagogical practices (e.g. Sule, Ameh & Egbai, 2015; Usman, 2015; Veloo, Komujji & Khalid, 2013). Sule, Ameh and Egbai (2015) for instance, studied the relationship between instructional supervision and the roles teachers play in ensuring effectiveness in secondary schools in Nigeria. Their study revealed that classroom observations positively contributed to teacher effectiveness in a school. Similarly, Veloo, Komujji and Khalid (2013) in their study about the effect of clinical supervision on the teaching performance of secondary school teachers in Malaysia, relatedly established that formal observations significantly contributed to improved teacher preparation, lesson development, learner assessment and classroom control. However, several literature (e.g. Tesfaw & Hofman, 2014; Campbell, 2013; Milanowski, 2011; Marshall, 2009; Holland, 2004) argue that formal classroom observations have little effect on teaching practices. These scholars meanwhile advocate for more frequent, short, unannounced, informal classroom observations by school authorities to motivate teachers to adopt effective pedagogical practices. They contend that informal classroom observations actually provide a better picture of the teacher's competence and his or her pedagogical practices than the formal observations. David (2008) however advises that for better results, the frequency and purpose of the walk-throughs or short visits to classrooms should be collaboratively established by the teacher and administrator. This view is also supported by other scholars such as Milanowski (2011) who points out that walk-throughs actually enable school administrators to establish whether teachers are employing effective pedagogical practices and meeting the set teaching standards (or not). He, in fact, counsels that for classroom observations to influence teacher performance, the supervisors should have an in-depth understanding of the subject being taught and should be trained in the use of supervision rubrics. Zepeda (2010) on the other hand asserts that classroom observations can only positively influence teacher effectiveness when supervisors focus on strengthening the relationship between themselves and teachers by holding coaching discussions one-on-one after the observations but not on fault-finding. In congruence with Zepeda's assertion on the approach of giving feedback, findings in a study on the impact of instructional supervision on students' academic performance by Usman (2015) revealed that the manner in which supervisors give feedback to supervisees, significantly impacts on the teachers' pedagogical practices and performance in classroom settings. Although these studies indicated that classroom observations significantly impacted on the teachers' pedagogical practices, the studies were majorly conducted in the context of developed nations. This study was conducted to fill that contextual gap.

With regard to portfolio supervision, findings of several studies reveal that portfolio supervision significantly explains teacher effectiveness in the classroom (e.g. Peretomode, 2001; Sule *et al.*, 2015; Usman, 2015). A study conducted on the impact of instructional supervision on academic performance of secondary school students in Nasarawa State, Nigeria by Usman (2015) for instance revealed the existence of a significant positive relationship between portfolio supervision and teacher performance. Similarly, findings of Sule *et al.* (2015) and Peretomode (2001) also exposed the presence of a positive relationship between portfolio supervision and teacher effectiveness. However, unlike Usman (2015) who took into consideration the review of lesson plans, lesson notes, students' notes and teachers' record keeping as important ingredients of portfolio supervision, Sule *et al.* and Peretomode concentrated their focus only on the review of the teachers' lesson notes. Orenaiya (2014) and Musaazi (2006) meanwhile counsel that it is imperative for supervisors to review teaching artefacts that include among others: schemes of work, lesson plans, teachers' notes and students' work to establish relatedness, completeness of task and syllabus coverage. However, Zepeda (2010) thinks that what to include in the supervised portfolio should be based on the purpose of the supervision. Bird (1990) as cited by Zepeda (2010) emphasizes that to improve students' learning, portfolio artefacts should focus on teaching tasks of planning and preparation, teaching in class and student evaluations. Indeed, a survey conducted in 10 districts of Uganda by DES (2012) on the quality of education in Uganda, established that less than 20% of head teachers effectively supervised teacher preparation which made it impossible to tell whether teachers were implementing the national curriculum or conforming to set teaching standards. This information was corroborated by the MoES's Education Sector Annual Performance Report (ESAPR) of 2013/14 (MoES, 2014a) that gives a figure of less than 40% of head teachers at all levels giving support supervision. According to DES' guidelines, head teachers are expected to ensure quality of teaching and learning through review of schemes of work, lesson plans and learners' work on regular basis (MoES, 2012). But this does not seem to be happening as required, in practice, in Uganda's secondary schools; hence, the genesis of this study.

3. Methodology

The study was conducted using the descriptive cross-sectional survey design. This research design enabled the researchers to collect data from only the sampled population in order to be able to generalise the study findings on the entire target population within a shorter time and at a lower cost. The study population was comprised of teachers and head teachers in public secondary schools in Uganda as well as the officials from the Uganda's Ministry of Education, and Sports (MoES). To ensure representativeness, a multi-stage sampling technique was used to select 95 schools from the four geo-politically known regions, namely: Northern, Central, Eastern and Western regions of Uganda. Using stratified random sampling, teachers were selected from each stratum based on lists provided by MoES. Stratification was based on whether the school was implementing the Universal Secondary Education (USE) policy or not (Non-USE). A sample of 934 teachers, 76 head teachers and two officials from MoES participated in the study. The researchers employed the survey, interview, documentary review and observation methods of data collection. Specifically, a 37-item questionnaire was adapted from the Directorate of Education Standards (DES) and used to collect data from teacher participants. The instrument was comprised of three sections. Section A was composed of five questions pertaining to respondents' background information; Section B was constituted by 11 questions focussing on classroom observations; Section C contained 9 items on portfolio supervision while Section D contained 12 items that sought opinions from teachers on their pedagogical practices in public secondary schools. The items in sections B and C were measured on a 5-point Likert scale with the following categories of responses: Strongly Agree (5), Agree (4), Non-committal (3), Disagree (2), and Strongly Disagree (1). While items in section D were measured on the rating scale of always (5), very often (4), non-committal (3), rarely (2), not at all (1). Meanwhile, two interview guides were constructed basing on the study objectives to gather data from the head teachers and the officials from DES that participated in the study. Lastly, data were also collected with the use of observation checklist. This tool was adopted from the teaching and learning assessment tool of DES that is used for evaluating teaching in classroom settings in Uganda. Before use, all the tools were first pilot-tested to guarantee their validity and reliability. Data were later analysed using descriptive and inferential statistics as well as content analysis techniques. The logistic regression model was specifically used to establish the extent to which explanatory factors contributed to the variability of the dependent variable. The tests of significance were actually performed at the probability level of $p < 0.05$, while the data collected using the unstructured interview guide and observation checklist were analysed through content analysis technique.

4. Results

4.1 Profile of Respondents

An overview of the demographic characteristics of the study respondents is presented in Table 1 below.

Table 1. Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	644	69.0
	Female	290	31.0
Qualification	Diploma	208	22.3
	Bachelors	577	61.8
	Post-graduate	149	15.9
Length of years in the school	Less than 3 years	175	18.7
	3 to 10 years	554	59.4
	10 years above	205	21.9
School type	USE	628	67.2
	Non- USE	306	32.8
Subject type	Arts	598	64.0
	Sciences	336	36.0

Results in Table 1 show that more male teachers (69.0%) participated in the study as compared to their female counterparts (31.0%). This suggests a gender disparity in employment of teachers in public secondary schools with more male teachers being employed compared to females. The results also show that the majority of the teachers (77.7%) in the sample had the requisite qualification (at least a Bachelor's degree) to teach at secondary school level. This shows that the teachers involved were knowledgeable in the context of the study. In relation to numbers of years spent in the schools, findings in Table 1 show that majority of the sampled teachers (81.3 %) had taught for more than three years in their respective schools. This indicated that the respondents had long standing cognate experience in serving as teachers. Results in the same table further reveal that of the teachers who participate in the study, 36% of them were science teachers while 64% were arts teachers. This suggests that there are fewer science teachers working in the public secondary schools in Uganda as compared to their arts counterparts.

4.2 Descriptive Results on Teachers' Views on Classroom Observations

Teachers' views on classroom observation were obtained to determine how regularly respondents were supervised, and given feedback. The results are presented in Table 2 below.

Table 2. Descriptive statistics of teachers' views on classroom observations

Classroom observation	Disagree	Non-committal	Agree
The head teacher regularly observes my teaching	401 (42.9%)	74 (7.9%)	459 (49.2%)
My head teacher usually notifies me before the lesson observation	578 (61.9%)	63 (6.7%)	293 (31.4%)
My head teacher usually gives immediate feedback after the lesson observation	467 (50%)	63 (6.7%)	404 (43.3%)
My head teacher usually focuses on the act of teaching rather than personality when supervising	639 (68.4%)	93 (10%)	202 (21.6)
My subject head of department regularly observes the way I teach	300 (32.1%)	60 (6.4%)	574 (61.5%)
I always plan with my subject head of department for the lesson observation	482 (51.6%)	78 (8.4%)	374 (40%)
I regularly hold discussions with my subject head of department after the lesson observation	484 (51.8%)	61 (6.5%)	389 (41.7%)
My head teacher usually makes short visits to the classroom while I teach	394 (42.2%)	28 (3%)	512 (54.8%)
Inspectors from the Ministry of Education usually supervise the way I teach.	594 (63.6%)	108 (11.6%)	232 (24.8%)
I regularly get feedback whenever the Ministry officials supervise me.	639 (68.4%)	93 (10%)	202 (21.6)
I am often happy with the manner in which my supervisors give feedback after lesson observation	355 (38.0%)	108 (11.6%)	471 (50.4%)

Results in Table 2 indicate that 61.5 % of the teachers' lessons were observed by subject heads of department, 49.2% by head teachers and only 24.8% by Ministry of Education officials. These imply that lesson observations are mostly conducted by subject heads of department probably because they have an in-depth understanding of the subject areas. Results in the table also suggest that head teachers were more involved in short visits to classrooms (54.8%) than whole lesson observations (49.2%). Furthermore, findings show that only 41.7% of the teachers got feedback on the lesson observations from subject heads of department, 43.3 % from head teachers and 21.6% from Ministry's officials. These imply that less than 50% of the teachers whose lessons were observed ever got feedback from the supervisors. With regard to pre-conferencing, the results in Table 2 show that 31% of the teachers pre-conferenced with their head teachers while 40% pre-conferenced with their subject heads of department before the actual lesson observations were held. These show that in cases where classroom observations were carried out, supervisors hardly notified teachers about the classroom observations or even held discussions with the teachers after the observations. Such practices tend to make supervisees uncomfortable and suspicious of the intentions of the supervisors.

Analysis of interview data revealed that head teachers of non-USE schools did not see the necessity of conducting classroom observations unless when students or parents complained about the quality of teaching of a particular teacher. When one head teacher of a non-USE school in Buganda region was asked how often he carried out classroom observation, she said:

...the teachers posted to this school know exactly what is expected of them as per the posting instructions; and since they are all university graduates, they should be able to learn the culture of quality teaching that they have found here. I do not think it is really necessary to go and sit in their classes to observe how they teach. Maybe when students or their parents complain....

Yet, findings from interview with head teachers of USE schools revealed that classroom observations were more pronounced in these schools because teachers taught in several schools or were engaged in other income-generating activities. One head teacher of a USE school in the Elgon sub-region for instance had this to say during an interview:

...our teachers earn only government salary; we do not pay monthly allowances like our colleagues in the Non-USE schools because we are not supported by parents through the Parents Teachers' Associations (PTA). And because of this, our teachers teach in several private schools to raise extra income and many times miss teaching learners in their "mother" schools. As a head teacher, I have to closely monitor the teachers by walking around the school and conducting regular lesson observations in order to ensure that my students are taught well.

These recorded responses implied that different head teachers approached the issue of instructional supervision

of teachers differently; that is, while some head teachers preferred short frequent visits to classrooms to whole lesson observations because these kept them abreast with what was happening in the classrooms, others did not. In fact, one head teacher during the interview remarked; "... short visits to classroom update me on what is exactly happening in the classrooms and helps me to ensure that the teaching and learning process goes on as expected...". Several head teachers interviewed acknowledged that it was important to discuss with the individual teachers immediately their lessons were observed. Indeed, some head teachers also revealed that they used the "teacher monitoring tool" which is a form given to students to indicate teacher attendance, punctuality, and time on task to conveniently monitor what was going on in the classroom. These forms, according to the head teachers, were given to students on Monday morning and collected on Friday evening for analysis. When asked about the type of action that is taken after the monitoring forms were analysed, one head teacher said, "...the names of the teachers who miss lessons are read during the assembly at the beginning of every week. I have found this to work well because most teachers do not want to have their names read at assembly." This finding implied that certain head teachers were reluctant to provide teachers with relevant feedback when they are supervised in a supportive and collegial approach.

4.3 Descriptive Results on Portfolio Supervision

In this section, descriptive results of the teachers' views on portfolio supervision by head teachers and subject heads are presented in Table 3 below.

Table 3. Descriptive statistics of teachers' views on portfolio supervision

Portfolio supervision	disagree	Non-Committal	Agree
The head teacher usually reviews my schemes of work	162 (17.3%)	29 (3.1%)	743 (79.6%)
My head teacher gives constructive often comments on my scheme of work	626 (67%)	92 (9.9%)	216 (23.1%)
My subject heads often reviews my schemes of work	100 (10.7%)	27 (2.9%)	807 (86.4%)
My subject heads of department always review the lesson plans	485 (51.9%)	51 (5.5%)	398 (42.6%)
My subject heads of department usually reviews my lesson notes	502 (53.7%)	48 (5.1%)	384 (41.1%)
The head teacher regularly usually reviews sampled students' notes	582 (63.3%)	104 (11.1%)	248 (26.6%)
My head teacher regularly reviews my record of work	237 (25.4%)	42 (4.5%)	655 (70.1%)
The subject heads of department usually moderate the tests and examinations I set	122 (13.2%)	27 (2.9%)	812 (86.9%)
The head teacher usually reviews the record of my students' marks	289 (30.9%)	32 (3.4%)	613 (65.6%)

Results in Table 3 indicate that to a large extent ($> 75\%$), schemes of work are reviewed; tests and examinations are moderated by the head teachers and subject heads of department. However, only 23.1 % of the teachers' schemes of work get constructive comments from head teachers. The discrepancy between the proportion of respondents whose schemes of work were regularly reviewed and those who got constructive comments from the head teachers, suggests that the administrators were not adequately reviewing the schemes of work. Results also indicate that; only 42.6% of the lesson plans are reviewed to ensure relatedness to the syllabi, 41.1% of the teachers' lesson notes are reviewed, and 26.6 % of the sampled students' notes are reviewed. The results reveal that with regard to teacher preparation, school authorities place more emphasis on review of schemes of work than the lesson plans and teacher's lesson notes. Results further show that 70.1% of the respondents' records of work were reviewed, 86.9% had their tests and examinations moderated, and 65.6% indicated that their head teachers reviewed their records on the students' assessments. These findings suggest that school authorities were keen on the teachers' completion of the syllabi and learner assessments.

Findings from the review of documents were in agreement with the results in Table 2. Most of the schemes of work reviewed had signatures of the head teachers but hardly had comments from the head teachers. One head teacher during the interview described the situation as:

All teachers in public secondary schools are obliged to make schemes of work and lesson notes at the beginning of the academic term in accordance with the guidelines of the Ministry of Education, and Sports. The teachers are required to submit the schemes of work and lesson notes to the head teacher through the subject head of department at the beginning of every term for review.

However, a scrutiny of the teachers' lesson notes showed that only a handful of them had signatures or school stamps to show that they had been reviewed by the administrators. In relation to review of the teachers'

record of work, moderation of tests and examinations, and review of students' results and records, one head teacher observed during interview that:

Performance of schools is not measured by how well teachers teach, but by how students perform in national examinations. It is therefore critical to ensure early completion of the syllabi, setting of standard tests and examination questions and close monitoring of the students' academic performance in the termly examinations.

This means that the public secondary school authorities are more concerned with the completion of the syllabi and assessments of the learners rather than on the pedagogical practices of the teachers.

4.4 Descriptive Results on Teachers' Pedagogical Practices

The teachers were asked to rate how frequently they do what is required of them in the teaching and learning process. This was intended to determine the teachers' pedagogical practices. The results are presented in Table 4 below.

Table 4. Descriptive results of teachers' perceptions on their pedagogical practices

Pedagogical Practices	Not at all	Non-committal	Always
Making schemes of work	154 (16.5%)	2 (0.2%)	778 (83.3%)
Making lesson plans	527 (56.4%)	40 (4.3%)	367(39.3%)
Preparing lesson notes	257 (27.5%)	17 (1.8%)	660 (70.7%)
Assessing student's prior knowledge	82 (8.8%)	16 (1.7%)	836 (89.5%)
Using variety of teaching methods	325 (34.8%)	5 (5%)	604(64.7%)
Using real life examples to teach	525(56.2%)	35 (3.7%)	374 (40%)
Giving class exercises	401 (42.9%)	21 (2.2%)	512 (54.8%)
Giving homework	89 (9.5%)	27 (2.9%)	818 (87.6%)
Revising homework exercises with students	353 (37.8%)	53 (5.7%)	528(56.5%)
Giving regular tests	260 (27.8%)	31 (3.3%)	643(68.8%)
Returning marked scripts in time	134 (14.3%)	22 (2.4%)	778 (83.3%)
Help students make corrections	111 (11.9%)	19 (2.0%)	804(86.1%)

Results in Table 4 show that 83.3% of the respondents made schemes of work, 70.7% prepared lesson notes, 64.7% used a variety of teaching methods, 89.5% of the teachers assessed the students' prior knowledge and skills, 87.6% gave homework, 83.3% returned marked scripts before giving the next test, and 86.1% made corrections whenever they returned marked scripts. These findings suggest that teachers, to a great extent, exhibit effective pedagogical practices in public secondary schools in Uganda. However, results also show that only 39.3% of the respondents made lesson plans. These suggest that several teachers in public secondary schools do not make lesson plans but probably rely on schemes of work and lesson notes. Results in Table 4 also show that whereas 87.6% of the respondents regularly gave homework and 55% gave class exercises, only 56.5% revised marked homework with the students. These results further suggest that teachers are more vigilant when it comes to assessment of tests than the assessment of class exercises and homework.

During document analysis, it was discovered that although schemes of work were made at every beginning of the term, most schemes of work lacked evidence of planning for teaching or learning aids and use of learner-based methods of teaching. Scrutiny of the schemes of work revealed that most teachers did not refer to the NCDC guidelines that emphasised learner-based approaches of teaching and practical teaching of science subjects. In fact, with regard to making lesson plans, analysis of interview data revealed that teachers perceived making lesson plans as a waste of time; hence, many of them relied mainly on lesson notes and text books in order to teach. As one head teacher observed, "teachers only make lesson plans during their teaching practice and when they expect inspectors from DES. To them, making lesson plans only wastes their time. It is an unfortunate practice - but one that we have learnt to cope with". This implies that some teachers employ undesirable pedagogical practices with the complete knowledge of their supervisors.

With regard to using a variety of teaching methods and specifically learner-based methods of teaching, the head teachers explained that teachers often find it difficult to go by the NCDC guidelines because they would not be able to complete the syllabi in time for the national examinations. Results of the lesson observation showed that of the 106 lessons that were observed, only 36 (33.9%) of the teachers varied methods of teaching, and of these, 31 (86%) were science or mathematics teachers. One head teacher from West Nile sub-region described the situation as:

Teachers shun learner-based methods of teaching because these methods consume a lot of time. The teachers cannot complete the syllabi if they are to follow the NCDC guidelines. However, mathematics and science teachers, to a certain extent, use learner-based methods of teaching since these subjects are practical in nature.

These meant that the teachers' pedagogical practices were skewed towards doing what could be considered undesirable; thus ineffective practices.

4.5 Verification of Research Hypotheses

Further analysis was conducted using ordered logistic regression to establish the variability in the teacher pedagogical practices accounted for by factors of instructional supervision and demographic characteristics. The analysis helped to test the following null hypotheses: Ho₁: Classroom observation has no significant effect on teacher pedagogical practices; and Ho₂: Portfolio supervision has no significant effect on teacher pedagogical practices. The results of the analysis are given in Table 5 below.

Table 5. Ordered logistic regression results on factors influencing pedagogical practices

Pedagogical practices	Coefficients	P-value	95% confidence interval	
			Lower bound	Upper bound
Classroom observation	4.1	0.000	3.598	4.699
Portfolio supervision	2.3	0.000	1.814	2.697
Sub-region	0.03	0.788	-.169	.223
School status	0.55	0.038	-.053	.869
Gender	0.03	0.900	-.436	.496
Education level	-0.26	0.146	-.619	.092
Duration	-0.32	0.012	-.579	-.071
Subject type	0.01	0.974	-.444	.459

PseudoR² = 0.722; Number of respondents = 934; LR χ^2 (11) = 1403.92; Prob > χ^2 = 0.0000

Results in Table 5 show that all the 934 observations were used in the analysis. The likelihood ratio chi-square of 1403.92 with a p-value of 0.000 ($p < 0.05$) indicates that the model as a whole was statistically significant compared to the null model with no predictors. Pseudo R² = 0.722 means that the explanatory variables in the model explained 72.2% variability in teacher pedagogical practices and 27.8% variability is explained by other unknown factors. In the model, classroom observations, portfolio supervision, the category of school and the number of years a teacher taught in the school were found to be statistically significant ($p < 0.05$) in explaining variations in pedagogical practices. Meanwhile, sub-region, status of the school, gender, level of education, and category of subject taught did not significantly explain variations in the pedagogical practices ($p > 0.05$) of teachers. Further findings also indicated that classroom observation has the greatest influence on pedagogical practices (odd ratio = 4.1) followed by portfolio supervision (odd ratio = 2.3). In addition, the results in Table 5 also indicated that a shift from one category to a higher category of the duration a teacher taught in a school, resulted into a 0.32 unit decrease in the ordered log odds. This meant that with other predictors held constant, pedagogical practices became poorer with the increasing number of years a teacher had taught in a school. This could be attributed to the teachers becoming complacent to the work situation. The results also showed that a unit increase in the category of schools (shift from USE coded 1 to non-USE coded 2) resulted into a 0.55 unit increase in the effectiveness of pedagogical practices. This meant that pedagogical practices were better in non-USE schools as compared to their counterparts in USE schools. Based on the findings in Table 5, the null hypotheses: Ho₁: Classroom observation has no significant effect on teacher pedagogical practices; and Ho₂: Portfolio supervision has no significant effect on teacher pedagogical practices were thus rejected. The results thus imply that instructional supervision significantly explains variations in the pedagogical practices of teachers.

5. Discussion

The study made three main findings: first, that classroom observations significantly ($p < 0.05$) affect teachers' pedagogical practices. Second, that portfolio supervision significantly ($p < 0.05$) affects teachers' pedagogical practices; and third, that instructional supervision was not adequately conducted in public secondary schools in Uganda. The findings that classroom observations significantly affect teachers' pedagogical practices are in congruence with that of earlier studies (e.g. Sule, Ameh & Egbai, 2015; Veloo, Komujji & Khalid, 2013; Peretomode, 2001). The findings were however in contrast to the findings of Wilcox (1995) and Kogan and Maden (1999) which revealed that instructional supervision generally brings about little improvement in the quality of teaching and learning within schools. The findings also demonstrate that head teachers prefer frequent informal classroom observations (or walk-throughs) to establish exactly what was happening in the classrooms and to ensure that the teaching-learning process was going on as expected. Although these walk-throughs as emphasised by Campbell (2013) provide a better picture of the typical classroom experience, they are limited to gathering data for teacher evaluation (Peterson, 2004). The walk-throughs should not only focus on formative teacher evaluation but also provide guidance and support for professional development and improvement in the teaching and learning processes (Tefaw & Hofman, 2014). In fact, according to Marshall (2009), walk-throughs provide better results if they are thoughtfully planned and followed by prompt one-on-one feedbacks that nurture some kind of two-way communication between school authorities and the supervised teachers. Relatedly, Zepeda (2007) advises that walk-throughs should be conducted in a manner that is supportive,

collegial and collaborative to give better results. In this study, it was discovered that the head teachers found using the “monitoring tool” for checking on teaching as an effective instructional supervision method because it kept them well informed about the teachers’ practices in the classroom. The form used to track on the teachers in classrooms is designed in such a way as to monitor teacher attendance, punctuality, teaching, and time on task. However, this form had shortfalls because the class monitors only ticked the column of lesson taught or not taught yet other columns for arrival and departure time were never ticked which made determining teachers’ time on task difficult. This form would be more effective if teachers were signing their time in and time out of the classroom.

Furthermore, the study results also revealed that supervision of artefacts such as schemes of work and lesson notes is done mainly as a ritual to comply with the Ministry of Education policy rather than as a practice to improve teaching and learning. The administrators are not keen in ensuring that the preparation of the schemes of work is in adherence to NCDC’s guidelines that emphasise planning for teaching aids, clearly spelling out objectives for teaching specific topics and indicating a variety of teaching methods. With regard to checking sampled students’ note books, findings confirmed that head teachers and subject heads rarely check students’ note books to determine relatedness of what was being taught with what was planned in the schemes of work. Monitoring the relatedness of students’ notes to the schemes of work and coverage of instruction form a basis of purposeful guidance and support to teachers’ classroom teaching (Orenaiya, 2014). Musaaazi (2006) in fact contends that as supervisors review sampled students’ notes, this should be done with the knowledge of the teachers. Teachers and administrators should come to consensus as to when and how to solicit and review student exercise books. The study further established that several teachers are not making lesson plans and regard this practice as a waste of time and yet lesson plans are key quality tools of teacher preparation since they clearly indicate learning outcomes, a logical description of the structure of the lesson and teaching methods to be used. The head teachers’ laxity on monitoring of lesson planning inhibits teachers preparing relevant teaching materials and activities for maximum learner participation which consequently affects quality of teaching and learning (Musaaazi, 2006). To enhance pedagogical practices, it is imperative that head teachers enforce making lesson plans as stipulated by the Uganda’s education Act of Parliament of 2008.

Despite the significant contribution of instructional supervision to pedagogical practices, results show that instructional supervision in public secondary schools faces a number of challenges. DES, the body that is responsible for monitoring and evaluating quality of teaching and learning at national level, lacks adequate workforce and logistical support to effectively supervise the teaching and learning processes. Results also show that head teachers focus on fault-finding and criticising teachers rather than helping teachers to improve on their teaching competencies. This is in agreement with what was reported in the ESAPR report of 2013/14 (MoES, 2014a). For effective instructional supervision, supervisors are expected to monitor the teaching and learning process, and give feedback to teachers on their performance in the classroom through pointing out errors or commending the teachers for the good work done (Mulkeen, 2010; Musaaazi, 2006). The results further reveal that the school authorities are not reviewing artefacts in detail to ensure adherence to NCDC’s guidelines; and yet to enhance pedagogical practices, supervisors should establish relatedness, completeness of task and syllabus coverage (Orenaiya, 2014; Musaaazi, 2006). It is important to note that, amidst the challenges facing instructional supervision in secondary schools in Uganda, the regional trainers for science and mathematics training (SESEMAT) project, have continued to conduct lesson observations and portfolio supervision of science and mathematics teachers across the country and this has greatly contributed to improved teaching and performance of science and mathematics subjects in schools. Unfortunately, SESEMAT’s instructional supervision does not benefit a bigger section (64%) of the teachers who teach the arts subjects (MoES, 2013).

6. Conclusion

Instructional supervision through classroom observations and portfolio supervision is a critical factor in enhancing pedagogical practices. Effective instructional supervision can be enhanced through classroom observations that are collaboratively planned by both the supervisors and teachers followed by feedback that is communicated in a collegial and supportive manner. Furthermore, keen supervision of schemes of work and lesson plan preparation and continuous checking of students’ note books for relatedness and syllabus coverage will ensure that teachers adhere to standards set by DES and NCDC. The “monitoring tool” is an efficient approach of instructional supervision; however, the administrators together with the teachers need to train students on how best to manage this tool.

7. Recommendations

Based on the above findings, discussion and conclusions, the researchers made the following recommendations. First, the government of Uganda should increase on the non-wage budgetary allocations to DES to cater for recruitment of more inspectors and procuring facilities for mobility of inspectors. This will facilitate regular supervision of the classroom teaching and learning in all schools, especially USE schools. Second, the Ministry

of Education should provide regular in-service trainings to head teachers and subject heads on classroom observations and portfolio supervision. Finally, the head teachers through the subject heads should ensure that teacher preparation is in tandem with NCDC's guidelines and what is taught corresponds to what is prepared.

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