

To cite this article: Polycarp Omara, Frances Naluwemba and John Bosco Ssetumba (2024). APPLICATION OF DEVELOPMENTAL SUPERVISION MODEL IN SECONDARY SCHOOLS IN GREATER ARUA, UGANDA, International Journal of Education and Social Science Research (IJESSR) 7 (4): 12-37 Article No. 953, Sub Id 1448

APPLICATION OF DEVELOPMENTAL SUPERVISION MODEL IN SECONDARY SCHOOLS IN GREATER ARUA, UGANDA

Polycarp Omara, Frances Naluwemba and John Bosco Ssetumba

Kyambogo University

DOI: <https://doi.org/10.37500/IJESSR.2024.7402>

ABSTRACT

The quality of any education system largely depends on the level of teacher competence and teacher competence enhancement depends on the support systems provided by the school-based supervisors. However, literature show that not all teachers especially in developing countries like Uganda demonstrate high level of competence. The study was conducted to examine the application of the different dimensions of developmental supervision in secondary schools in Arua, Uganda. The study employed a concurrent mixed method design. Simple random and purposive sampling techniques were employed. Data were collected from 270 teachers using self-administered questionnaires while 20 head teachers and 20 directors of studies participated in semi-structured interviews. Thematic analysis techniques were used to analyse qualitative data while descriptive statistics were used to analyse quantitative data. The findings revealed that school-based supervisors employed directive supervision, collaborative and non-directive supervision. However, directive supervision was commonly applied compared to collaborative and non-directive supervision. Head teachers preferred directive supervision to be applied to all categories of teachers. On the other hand, teachers preferred directive supervision to be applied to novice teachers while collaborative and non-directive supervision to be applied to experienced teachers. Binary logistic regression model revealed that there was no significant difference in application of supervisory approaches according to participants demographics. The study recommends training of school-based supervisors, harmonisation of policy on supervision and encourage head teachers to delegate supervisory roles to senior teachers and John Bosco Ssetumba

KEYWORDS: Instructional supervision, directive supervision, collaborative supervision, non-directive supervision, teacher competence

INTRODUCTION

The quality of a nation depends on the quality of education system. The quality of an education system largely depends on the level of teacher competence. Teacher competence enhancement depends on the support systems provided by the school-based supervisors (Apriliyanti, 2020). The need to enhance teacher competence and quality education through support systems such as mentorship and supervision is as old as the introduction of formal education globally (Kangwa, 2018; Tsui, O'Donoghue, Boddy, & Pak, 2017).

As an external inspection process, supervision originated in Europe in the 1700s and spread to the United States later on (Marzano, Tony, & David, 2011). Between 1842 and 1875, administrative supervision was implemented, relying on principals for oversight. However, principals made educational judgments of significance (Samoei, 2014). For many decades, the majority of African republics adhered to the traditional, top-down inspectorial approach acquired from many former British colonies (Tyagi, 2010; Samoei, 2014). In Uganda, school inspections began in 1924, during a time when the majority of educational institutions were owned by missionaries. The missionaries adopted supervision to preserve quality teachers and instruction (Haas & Frankema, 2016). Religious leaders were given supervisory tasks and obligations. Ssekamwa and Lugumba (2001) contend that despite the fact that missionaries were tasked with supervising instructors, the Phelps-Stoke commission's report suggested that schools were ineffectively overseen due to a lack of competent personnel. The Education Amendments of 1970 mandated the inspectors to conduct inspection in schools and classroom. (Ssekamwa, 1997). Following the establishment of the Education Review commission in 1987 to evaluate the entire education system, the 1992 Government White Paper on education advocated bolstering the bodies and persons in charge of supervising teacher performance (Republic of Uganda, 1992). The 2008 Act demanded that school inspectors monitor teacher effectiveness (MOES, 2008). As stated in the National Teacher Policy, the quality of teachers has always been a fundamental issue in the majority of secondary schools in Uganda (MOES, 2019). As a result, head teachers are required by their positions to conduct school-based instructional monitoring either personally or via delegated school officials.

In education, supervision generally refers to the daily guidance provided to all education operations by school administrators and specialists to the various education stakeholders (Olorode & Adeyemo, 2012). According to Wiyono and Rasyad (2021), supervision is the process of aiding the teacher to enhance the quality of the teaching-learning process and the learning outcomes of the students. This kind of supervision is referred to as instructional supervision. According to Moswela (2010) and Ampofo, Onyango, and Ogola (2019), instructional supervision is the process of evaluating a teacher's performance in order to help him or her review and enhance classroom practice. Due to the differing definitions of instructional supervision, several methodologies and models, including scientific, human relations, and clinical supervision, have been studied and debated (Ozyildirim, 2016). Glickman recently presented the developmental supervision model. The supervisor modifies his or her communication and engagement style based on the professional needs of the teacher under developmental supervision (Glickman, Gordon, & Ross-Gordon, 2010; Strieker, Adams, Cone, Hubbard, & Lim, 2016). In this study, the researcher adopted the conceptualization of instructional supervision by Glickman et al. (2010), who viewed instructional supervision as the act of assisting teachers to improve instruction by employing one of the appropriate supervisory approaches, namely direct assistance, directive informational, collaborative, and non-directive teaching behaviours. According to a number of studies the majority of secondary school teachers in Uganda do not prepare their courses, lack basic classroom management skills, do not administer evaluations, and rarely employ current technology in the classroom (Malunda, Onen, Musaaazi, 2016; Malunda, Onen, &

Oonyu, 2016 ; Komakech & Osuu, 2014). However, the majority of these research were conducted outside of the Arua district. This suggested study sought to address this gap in knowledge.

STATEMENT OF THE PROBLEM

Research experts agree that when instructional supervision is conducted properly, teachers become more knowledgeable, innovative, highly committed, and capable of providing instructional leadership (Ampofo et al., 2019; Gloria, Nonye, & Gloria, 2016; Kalule & Bouchamma, 2014; Samuel & Adekunle, 2019; Stark, Mcghee, & Jimerson, 2017; Wahdini & Saleh, 2020). However, reports indicate that instructional supervision is not well conducted. Few supervisions conducted were said to be unprofessionally done (Komakech & Osuu, 2014; Malunda, Onen, Musaazi John C.S., 2016; Odama, 2019). Unprofessional supervisors use supervision as a weapon rather than a tool for professional development. This kind of supervisors do not involve teachers in making instructional decisions on the use of teaching methods and use of instructional materials (Okunia, Ayikoru, & Naluwemba, 2019). This is reflected in the poor performance in both formative and summative assessments of learners in Greater Arua as compared to their counterparts in Central and Western Uganda (Lating, 2009; UNEB, 2014, 2019). Despite the huge investments in professional development of teachers and school-based supervisors such as SESEMAT and STAR, inadequate supervision in greater Arua is still being reported, with its adverse effects on teacher competence development and performance (Komakech & Osuu, 2014; Malunda et al., 2016; Odama, 2019). If this appalling situation is not addressed, it could lead to teachers with low self-esteem and students with continuously low academic accomplishment. Consequently, it was necessary to examine the application of the different dimensions of developmental supervision in secondary schools in Arua, Uganda.

Purpose of the study

This study aimed at examining the application of the different dimensions of developmental supervision in secondary schools in Arua, Uganda.

Research objective

This study was intended to:

1. Examine how the dimensions of developmental supervision is applied on teachers in secondary schools in greater Arua, Uganda

Research question

1. How are the different dimensions of instructional supervision applied in secondary schools in Arua, Uganda?

2.1 Theory X and theory Y

The theoretical review was guided by Douglas McGregor's (1960) theories X and Y. According to the theories, how managers treat their staff depends on how they see the actions of the staff (Hattangadi, 2014; Malunda, Onen, Musaazi, 2016). McGregor (1960) argues that a theory X manager assumes that average employees are inherently lazy and will avoid work if they can; despise work; lack ambition; and do not want to take responsibility, preferring to follow rather than lead in work environments. Consequently, these managers believe in directive supervision and implementing comprehensive control systems. Theory Y is a participative management style that thinks employees will exert self-direction and self-control to achieve organizational goals. It posits that the average employee enjoys work as naturally as he or she enjoys play; he or she is committed and prepared to assume responsibility without being closely overseen (Malunda, Onen, Musaazi., 2016; Hattangadi, 2014). Considering these assumptions, a theory Y manager believes employees do not require close supervision or coercion to do assigned duties. Theory Y managers develop staff motivation and commitment through involvement encouragement.

A few academics have criticized theories X and Y on the grounds that they emerged in the industrial period and are difficult to implement in education (Oyeyemi, 2013). Some scholars have questioned the rigidity of these beliefs, arguing that regardless of how mature and experienced workers are, they require leadership and oversight (Hattangadi, 2014). Nonetheless, theories X and Y have been successfully applied to explore several facets of management, such as teacher supervision (Hattangadi, 2014; Malunda, Onen, & Oonyu, 2016a; Oyeyemi, 2013). These theories will assist school administrators in determining how to monitor secondary school instructors. School administrators who believe that teachers who appear to be incompetent, despise their jobs, and may attempt to dodge accountability tend to employ directive supervision. Those school administrators, however, who presume that instructors are dedicated and possess a high level of professional competence, will employ collaborative and non-directive supervision. Therefore, the theory served as the prism through which the supervisor-supervisee relationships was examined.

2.2.1 Dimensions of school-based instructional supervision

School-based instructional supervision is a process through which school administrators work closely with teachers to improve teaching and learning in the school (Wanzare, 2012). Accordingly, school authorities may use either directive, collaborative or non-directive supervision depending on the teacher's developmental level (Hoque, Banu, Kenayathulla, Subramaniam, & Islam, 2020). However, literature show that school authorities mostly used directive supervision compared to other approaches (Ampofo et al., 2019; Ibrahim, 2018; Shulman, Sullivan, & Glanz, 2008).

A study by Shulman et al., (2008) revealed that administrative supervision was lacking in most schools surveyed. The study also reported that the few supervisions carried out were evaluative, rigid and non-democratic. And yet Hoque et al., (2020) advise that, supervision should not be looked at as a tool to evaluate teacher's performance but as a technical process aimed at improving teacher professional knowledge and skills. Similarly, Nzabonimpa, (2009) found out that instructional supervision was lacking in most secondary schools in Wakiso district, Uganda. Many factors have been found to inhibit effective supervision such as inadequate resources, questionable supervisor practices and lack of consistency (Wanzare, 2012).

According to Glickman et al., (2010), the supervisor may use either directive, collaborative or nondirective supervision approach depending on the developmental level of the teacher. Thus, supervisors choose supervisory approach depending on the teacher's needs and abilities. To reinforce the above assumption, (Hoque, Kenyathulla, Subramaniam, and Islam, (2020) categorised teachers into four groups. In the first category are teachers who rely on their supervisors to provide solutions to their instructional challenges; secondly are teachers who would want to work jointly with their supervisor to mitigate instructional challenges; in the third group are teachers who regard their supervisors as resources to rely on and the fourth category are teacher who want to attain autonomy in handling instructional challenges and professional development.

Similarly, Strieker, Adams, Cone, Hubbard, and Lim, (2016) found out that supervisors used all the three approaches of developmental supervision. Similarly, Karnati, (2019) found out that principals implemented directive, nondirective and collaborative supervision depending on the needs of the teachers. He posited that directive approach is applied to teachers who are low conceptual level. Collaborative supervision on the other hand was used with teachers who are knowledgeable and energetic, through presenting, explaining, listening, solving problems and negotiating. Non directive supervision was applied to teachers who expressed high conceptual skills and autonomy during instructional process.

The above literature imply that developmental supervisory approaches have been applied to different categories of teachers. However, most of these researches have been conducted outside the context of Arua. Little is known about the dimensions of supervision applied by supervisors in secondary schools in greater Arua. Therefore, it was necessary to examine the application of the different dimensions of developmental supervision in secondary schools in Arua, Uganda.

METHODOLOGY

This study employed a pragmatic research paradigm. Pragmatism is a theory of meaning and of the truth. It is based on the premise that the significance of an event cannot be determined in advance (Morgan, 2014). The central tenet of pragmatic philosophy is that knowledge and reality are founded on socially formed beliefs and habits (Hall, 2013). Pragmatism is founded on the premise that researchers should employ the methodological strategy that is most effective for the specific research

problem being investigated (Kaushik & Walsh, 2019). The focus is on the repercussions and significance of an action or occurrence in a social context. Therefore, pragmatism as a research paradigm is appropriate for this study because it permits the collecting of numerous forms of data that provide a comprehensive knowledge of the connection between instructional supervision and teacher competence in secondary schools in Arua

RESEARCH DESIGN

In this study, concurrent parallel mixed method design was utilized. According to (John W. Creswell, 2014), concurrent parallel mixed method is a type of mixed method design in which the researcher converges or combines quantitative and qualitative data to provide a thorough analysis of the study subject. Both types of data were collected concurrently, and the information was incorporated into the interpretation of the overall findings. The mixed method approach, as advocated by Kumar (2014), combines the strengths of quantitative and qualitative methodologies to fulfil the study's objectives. This study was most suited for a qualitative approach since it allows for a detailed examination of the research environment in order to acquire an in-depth understanding of what is occurring, how it is occurring, why it is occurring, and how individuals see their context in general. The quantitative method, on the other hand, facilitated the collecting of voluminous data from a larger population by requesting respondents' opinions on the relationship between instructional supervision and teacher competence. This permitted the generalization of research results.

Population and sampling

In this study, the target population will consist of all secondary school principals, assistant principals, and subject teachers in Arua. According to records from the Education department of Arua, which includes Arua city, and Arua district these included 32 head teachers 32 deputies in charge academics, and 900 subject teachers from 32 secondary schools in the district. This resulted in a parent population of 964 individuals. A sample size of thirty percent of the population was sufficient for achieving reliability and validity (Brankaert et al., 2009). The sample for this study consisted of 270 teachers, 10 headteachers 10 deputy in-charge academics.

Sampling techniques

This study used random sample for quantitative approaches and purposive sampling for qualitative methods. Kumar (2014) identifies this as a mixed sampling method. The characteristics of probability and non-probability sampling designs are present in mixed sampling. Random sampling is a method in which each member of a population has an equal chance of being selected (Maxwell, Creswell, & Stringer, 2009). To obtain a representative sample, the study will implement Mugenda and Mugenda's (2009) suggestion to sample 10 percent of a large population and 30 percent of a small population. The study will consequently employ a 30% sample size for all participants. Out of the 32 secondary schools found in Arua, 10 schools (30%) were sampled. All the head teachers and deputies in-charge academics of these 10 schools was purposively selected to participate in the study. Thus, 10 deputies in-charge academics and 10 headteachers from secondary schools in Arua were purposively selected to

participate in the interviews. Owing to their rarity, all female headteachers were included in the study. As they are responsible for the day-to-day administration and management of the school, the headteachers will offer information on the status of teacher competence. The headteacher is also accountable for routine supervision of instruction and curriculum administration. The deputy in charge academics develop and oversee the implementation of the school's academic plans and programs.

A stratified random sampling technique was used to select 270 teachers out of 900 teachers. In each school, teachers were grouped into three groups according to their years of experience. The first group constituted novice teachers who have served for less than five (05) years, the second group comprised of average teachers who served for 6 to 10 years and experienced teachers who have served for eleven years and above. Simple random sampling was then used to sample research respondents from each category. This enabled generalization of the findings to the entire population.

Table 1.1: Teacher’s years of teaching experience- Survey

Teaching experience				
	Frequency	Percent	Valid Percent	Cumulative Percent
Novice (0-5 years)	88	36.5	36.5	36.5
Average (6-10 years)	78	32.4	32.4	68.9
Valid Experienced (Above 10 years)	75	31.1	31.1	100.0
Total	241	100.0	100.0	

From the table, it is evident that a majority of novice teachers (36.5%) were between the age of 0.5, 78 (32.3%) were average teachers of 6-10 years of teaching experience. Finally, 75 (31.1%) are experienced teachers of above 10 years in service.

Methods of data collection

The study used both quantitative and qualitative research approaches and data collection methods employed included cross-sectional survey and interview to allow corroboration of data.

Semi-structured interviews

The flexibility of a semi-structured interview allows participants to express their opinions and ideas in their own terms, and also permits probing and prompting. This is consistent with Manser and Mitchell (2012) assertion that semi-structured interviews allow for clarification and more information to be

obtained. Kothari, (2004) adds that interviews allow for flexibility, the observation and interpretation of body language, and the pursuit of additional information that cannot be easily gathered by survey techniques. This enables the researcher to interact with participants in order to gain required explanations on the application of the different approaches of supervision.

As a data collection instrument, interview guide was prepared to enable the use of essential questions and supplementary questions to probe for emerging concerns throughout the topic. The semi-structured model of interviews permitted a natural flow of conversation and the modification of interview questions in response to participant data (Ingleby, Cohen, Manion, & Morrison, 2012).

Survey

A survey entails collecting data by answering questions that seek to comprehend the subject under investigation. The questionnaire was the primary instrument for data gathering. The survey method facilitated data collection from a large, literate population. Survey was one of the relevant approaches for this study because it provided data collection from teachers in a single location, making it affordable and efficient; it allowed for the representation of a broad population of interest; and it collected standardised data that were used for generalisation (Ingleby et al., 2012).

As one source of data, questionnaires consist of written sets of questions addressed to respondents (Kothari, 2004). The justification for utilizing questionnaires is that they have a broader coverage and reduce the effect of human interaction between the researcher and the subject. The researcher adapted the dimensions of developmental supervision questionnaire created by (Glickman et al., 2010). Questionnaires for teachers consisted of two sections; demographic information, and Likert scale items. Section A sought information such as age, gender, professional qualification and years of experience in the position. Section B was made up of Likert scale items on the status of developmental supervision.

Validity and reliability of research instruments

Validity and reliability in quantitative research

Validity is the degree to which research findings accurately represent the phenomenon being examined (Mugenda & Mugenda, 2009). To increase the validity of the research instruments, specialists in the field of instructional supervision will validate the tools. Likewise, the questionnaire questions were adapted from previously tested instruments. Using the formula $CVI=R/n$, where R is the number of relevant items and n is the total number of items in the instrument, the test of content validity was determined by independent evaluation by two research professionals. To guarantee the tools' validity, they were piloted with headteachers, deputy in-charge academics, and teachers from secondary schools in Koboko municipality and Koboko district. This is because they share similar characteristics with Arua as the study site. Pilot testing as a preliminary survey assisted in identifying any instrument flaws (Kothari, 2004).

According to Macmilan (2004), reliability is when an instrument produces consistent results. This was determined using SPSS version 27 and the Cronbach's Alpha, after completing a pilot study in selected secondary schools in Koboko that share similarities with Arua.

Validity and reliability in qualitative research

To establish the trustworthiness of qualitative research, tests of the data's credibility, dependability, transferability, and confirmability was undertaken to determine the validity and dependability of the instruments used for data collection. According to Kumar (2014), credibility determines the extent to which participants believe the results, whereas dependability considers whether the same results can be produced if the same thing is observed twice. Transferability refers to the extent to which results may be generalized or translated to new contexts, whereas confirmability is the amount to which results can be confirmed or corroborated by others (Kumar, 2014).

Validity and reliability were ensured in this study by obtaining the participants' validation, confirmation, and approval of the research findings. Future researchers will be able to assess the level of dependability and transferability by adhering to a comprehensive and complete data collection procedure. Using methodological and data triangulation, the authenticity was evaluated. The use of triangulation increases precision and generates complementary data that enhance the comprehensiveness of study conclusions (Martyn, 2007).

Data processing and analysis

The data was analysed, utilizing descriptive, inferential, and content analysis methods. In a convergent parallel mixed method design, both qualitative and quantitative data was analysed separately and then brought together. This study employed a side-by-side method to data analysis in which quantitative statistical results were provided first, followed by qualitative outcomes that would either validate or refute the statistical conclusions. Using thematic analysis methodologies, qualitative data was analysed during and after data collection (Creswell, 2009). During the data gathering process, data analysis activities utilized preliminary data analysis to help conceptualize the study's aim, establish its boundaries, and formulate analytical questions (Goodwin & Goodwin, 1996). After data collection, the interview data were transcribed (Manser & Mitchell, 2012).

Using semi-structured interviews, data on objective one, which sought to investigate the dimensions of instructional supervision, were collected and analysed using thematic analysis. Data was categorized by important constructs, allowing for coding and the development of themes pertinent to the research objectives and issues (Brenner, 2006; Lapan, Quartaroli, & Riemer, 2011). Quantitative data was analysed using descriptive statistics. The univariate data was analysed using descriptive statistics and presented in a frequency table along with calculations for percentages, mean and standard deviation (Brankaert et al., 2009; Wiersma, 2005).

Ethical consideration

Ethical considerations were made to guarantee that the research does not interfere with the participants' lives (Wilson, 2009). The researcher sought ethical approval from Gulu University Research Ethics Committee (GUREC). The study was registered with Uganda National Council for Science & Technology (UNCST). Consent was requested from all adult participants, and confidentiality was maintained while processing data and using pseudonyms for schools and participants. The participants' rights and dignity were protected. No harm was caused to volunteers during the course of the study. The researcher and research assistants were urged to conduct themselves with honesty and integrity.

FINDINGS

Dimensions of developmental supervision employed in secondary schools in Arua, Uganda

The study objective was to establish the different dimensions of developmental supervision employed in secondary schools in Arua, Uganda. These dimensions were studied using directive, collaborative and non-directive supervision. Results on each of these are provided in the following subsections. To determine the various dimensions of developmental supervision in secondary schools in Arua, data were collected from teachers using questionnaire.

Data from survey and interviews revealed that school-based supervisors in secondary schools in Arua use all the three approaches of developmental supervision, as shown in the table below.

This dimension of supervision was studied using five quantitative items on which respondents were requested to do self-rating, basing on a Likert scale ranging from 1= strongly disagree, 2= disagree, 3= agree and 4= strongly agree. Pertinent results are provided in Table 4.2.

Table 1.2: Frequencies, percentages, means and standard deviation on directive supervision

Indicators of directive supervision	SD	D	A	SA	\bar{x}	Std. Dev
My supervisor provides suggestions to improve teaching and ensure that I follow them	10 4.1%	13 5.4%	129 53.5%	89 36.9%	3.23	0.733
During discussion, my supervisor makes the	16 6.6%	42 17.4%	119 49.4%	64 26.6%	2.958	0.840

final decision on what needs to be improved						
My supervisor finds solutions for me to solve the instructional problem	25 10.4%	67 27.8%	100 41.5%	49 20.3%	2.717	0.905
My supervisor tells me what I should do to improve their teaching	16 6.6%	48 19.9%	135 56%	42 17.4%	2.842	0.785
This approach is used to supervise new teachers and those seeking help for improvement	12 5%	30 12.4%	113 46.9%	86 35.7%	3.132	0.815

Table 1.2 shows that majority of the study respondents 90.4% agreed that their supervisors ensure that they follow suggestions to improve teaching. Compared to 9.5% who disagreed. The mean 3.232 was equal to code 3 agree on the Likert scale that was used showing that there was agreement that they ensure that they follow suggestions to improve teaching while the standard deviation 0.733 was low implying that they had similar views and opinions regarding following suggestions to improve teaching.

Most of the study respondents 76% agreed that during discussion, their supervisor makes final decision on what needs to be improved. This was opposed to 24% who disagreed. The mean 2.958 was almost equal to code 3 agree which suggested that supervisors make final decision of what needs to be improved. The standard deviation 0.840 was low implying that they had similar views and opinions on this item.

Respondents 61.8% agreed that their supervisor finds the solutions for them to solve the instructional problem. This was opposed by 38.2% who disagreed. The mean 2.717 almost equal to code 3 agree, which suggested that they had agreed with this item. The standard deviation 0.905 was low implying that they had similar views and opinions on this item.

Majority of the study respondents 73.4% agreed that their supervisor tells them what to do to improve teaching. This was opposed to 29.5% who disagreed. A mean of 2.842 was equal to code 3 agree on the Likert Scale that was used.

Most of the study respondents 82.6% agreed that this approach is used to supervise new teachers and seek help for improvement. This was opposed to 17.4% who disagreed hence suggesting supervision of new teachers is done to seek improvement. A mean 3.132 was almost equal to code 3 agree on the Likert Scale that was used. The mean and percentages showed that directive supervision is highly done and enforced in the selected secondary schools in greater Arua district.

To summarize these findings a histogram and curve were generated as in Figure 4.1:

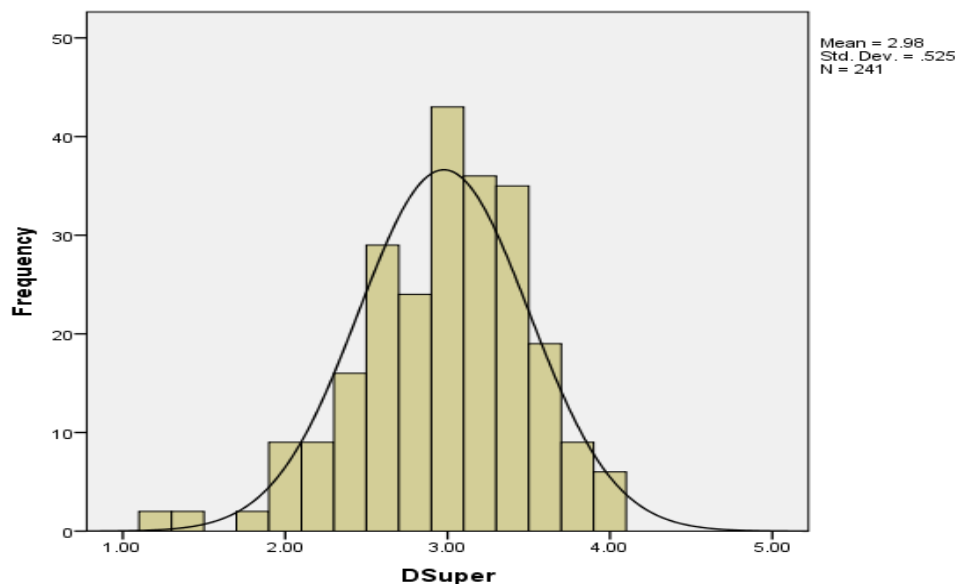


Figure 1.1: Histogram and Curve on Directive Supervision

The histogram and curve in figure 1.1 show that most of the study respondents were concentrated on the right side of the curve showing agreement with directive supervision that it is effectively done in secondary schools in greater Arua District.

Collaborative supervision

In this section, collaborative behavior in supervision were studied using five closed ended items on which respondents were requested to do self-rating basing on Likert scale ranging from 1-4 for strongly disagree to strongly agree. Table 1.3 gives summary results.

Table 1.3: Frequencies, percentages on collaborative supervision behavior

Indicators of collaborative supervision	SD	D	A	SA	\bar{x}	Std. Dev
My supervisor listens and accepts my suggestions for improvement	62 25.7%	134 55.6%	38 15.8%	7 2.9%	1.958	0.729
My supervisor accepts disagreement from me while discussing	69 28.6%	119 49.4%	47 19.5%	6 2.5%	1.958	0.762
My supervisor shares decision making responsibility with me to select the best teaching practices	71 29.5%	129 53.5%	26 10.8%	15 6.2%	1.937	0.806
My supervisor works as a colleague with me to overcome issues of classroom teaching	17 7.1%	76 31.5%	97 40.2%	51 21.1%	2.917	2.732
The approach is applied to teachers who suggest solutions to improve classroom teaching	10 4.1%	20 8.3%	148 61.4%	63 26.1%	3.095	0.709

Table 1.3 shows that majority of the study respondents 81.3% disagreed that their supervisor listens and accepts their suggestions for improvement compared to 18.7% who agreed. This finding implied that there is listening of supervisors which allows to improve on their work. The mean 1.958 was almost equal to code 2 disagree on the Likert scale that was used.

Majority of the study respondents 78% disagreed that their supervisor accepted disagreement from him while discussing. This was opposed to 22% who agreed. This meant there was disagreement with the view that supervisors agreed with disagreements at work.

Results revealed that 83% of the study respondents had disagreed that their supervisors share decision making responsibility with them to select best teaching practices. This was opposed to 17% who agreed. This hence suggests that supervisors are not willing to share decision making responsibility as a way to select best teaching practices. The mean 1.937 was almost equal to code 2 disagree on the Likert scale used. This hence confirms disagreement with this item.

A big number of the study respondents 61.3% agreed that their supervisors work as colleagues with them to overcome issues on classroom teaching. This differed from 38.6% who disagreed. This hence suggests that there was agreement that supervisors work as colleagues to overcome issues in classroom teaching.

Finally, respondents 87.5% agreed that the approach of collaborative supervision is applied to teachers who suggest solutions to improve their classroom teaching. This differed to 12.4% who disagreed. This thus implied that this approach is greatly used to suggest solutions in their classroom teaching. The percentages and means meant that the collaborative approach to supervision is to a less extent utilized in the greater Arua secondary schools. The highest mean value was 3.095 on item ‘the approach is applied to teachers who suggest solutions and the lowest mean value was 1.937 almost equal to code 2 disagree. This implied that in general there was disagreement with collaborative supervision.

The standard deviations on all items were low implying that there was commonality of respondents’ views from one another. To get a general view on collaborative supervision all item in Table 4.3 were aggregated into one average index Csupervision which is an acronym for collaborative supervision. Results are offered in Figure.1.2:

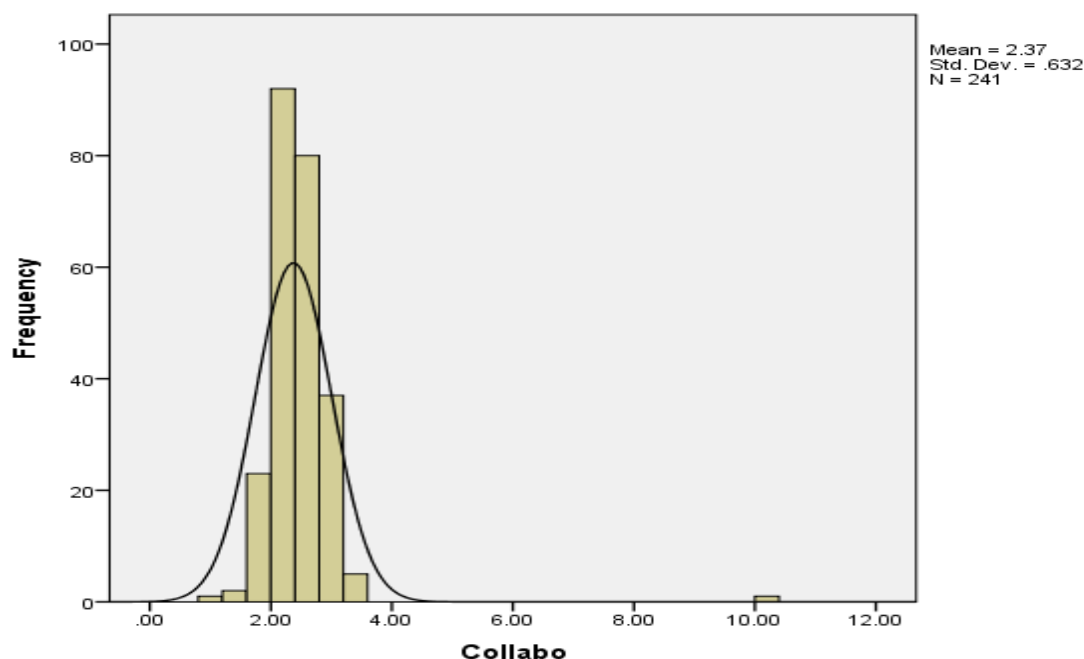


Figure 1.2: Histogram and curve showing distribution of respondents on collaborative supervision.

The histogram and curve in Figure 4.3 show that most of the respondents’ views were concentrated on the left side of the histogram and curve showing that collaborative supervision is not effectively done in greater Arua secondary schools.

4.2.3 Description of Non-directive supervision

Non-directive supervision the third aspect of supervision was studied using five quantitative items. Respondents were requested to do self-rating and results are offered in Table 4.4.

Table 1.4: Frequencies, percentages, means and standard deviations on non-directive supervision

Items on non-directive supervision	SD	D	A	SA	\bar{x}	Std. Dev
My supervisor allows me to find the best practice to solve the problem on classroom teaching	36 14.9 %	136 56.4 %	50 20.7%	19 7.9%	2.215	0.790
My supervisor lets me explore and generate a variety of alternatives and choose the most appropriate one.	70 29%	124 51.5 %	37 15.4%	10 4.1%	1.946	0.780
My supervisor encourages me to be creative and innovative in teaching	21 8.7%	58 24.1 %	88 36.5%	74 30.7%	2.892	0.942
My supervisor supports the suggestions to improve classroom teaching	53 22%	147 61 %	32 13.3%	9 3.7%	1.987	0.709
The approach is applied to teachers who can solve problems independently	11 4.6%	15 6.2 %	147 61%	68 28.2%	3.129	0.715

Table 1.4 shows that most of the study respondents 71.3% disagreed with the view that their supervisors allow them to find best practices to solve the problem in classroom teaching. This was opposed to 12.4% who differed. This finding was in line with mean 2.215 almost equal to code 2 disagree on the scale that was used. This finding implied that supervisors do not allow them find best practices to solve their classroom teaching.

Most of the study respondents 80.5% disagreed that their supervisor lets them explore and generate a variety of alternatives and choose the most appropriate plan for them. This differed from 19.5% who agreed. This suggests that teachers are not allowed to explore and generate a variety of alternatives and choose the most appropriate of them. A mean of 1.949 was almost equal to code 2 disagree, thus confirming disagreement with this item.

Respondents 67.2% agreed that their supervisor encourages them to be creative and innovative in their classroom teaching. This was opposed to 32.8% who disagreed. A mean of 2.892 was almost equal to code 2 disagree. This implied that supervisors of teachers allow them to be creative and innovative in their classrooms.

Majority of the study respondents 83% disagreed that their supervisors support their suggestions to improve class teaching. This was opposed to 17% who agreed. A mean 1.987 was almost equal to code 2 disagree. Hence it meant that supervisors do not support suggesting to improve classroom teaching.

Finally, 89.2% of the study respondents agreed that non-directive supervision is applied to teachers who can solve problems independently. This differed from 10.8% who disagreed. A mean of 3.095 was almost equal to code 3 agree on the scale that was used. It presupposes that there was agreement that teachers suggest solutions to improve classroom teaching.

The means and standard deviations suggested that non-directive supervision is not adequately emphasized among teachers in secondary schools in greater Arua district. The standard deviations on all items were low with the highest standard deviation 0.942 and lowest standard deviation 0.715. These suggested that respondents' views did not vary from one respondent to another. To get a summary view of findings in Table 4.4 all results were aggregated into one index Ndirective which was an acronym for non-directive supervision. Results are offered in Figure 1.3:

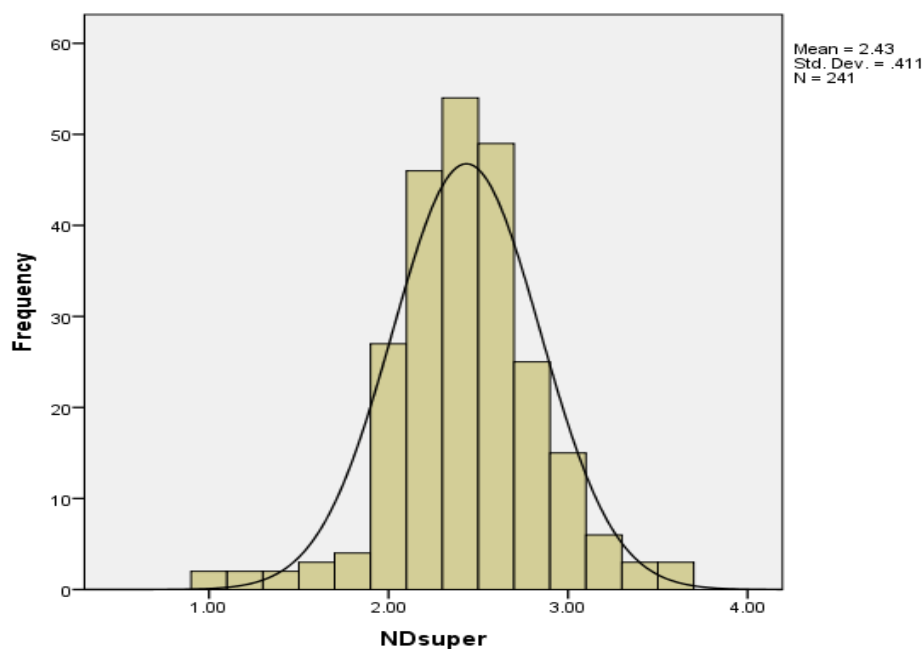


Figure 1.3: Histogram and curve showing distribution of respondents on non-directive supervision

The histogram and curve in Figure 4.3 reveal that most of the study respondents were concentrated on the left side of the histogram and curve suggesting that non-directive supervision was not effectively and highly carried out on teachers in greater Arua selected secondary schools.

Table 1.4: Application of developmental supervisory approaches

\$Supervisory approaches*Teaching_experience1 Crosstabulation

			Teaching_experience1			Total
			Novice (0-5 years)	Average (6-10 years)	Experienced (Above 10 years)	
Supervisory approaches	Directive	Count	86	74	71	231
	Collaborative	Count	60	59	58	177
	Nondirective	Count	66	62	63	191
Total		Count	88	78	75	241

Percentages and totals are based on respondents.

a. Dichotomy group tabulated at value 1.

Table above shows that supervisors used the directive, collaborative and nondirective supervisory approaches. However, data revealed that the majority of teachers (count=231) agreed that their supervisors used mostly directive supervision approach. This is followed by non-directive supervision (count=191) and the least number of teachers (count=177) agreed that their supervisors used collaborative supervision approach. The results show that there is equal engagement in the directive, collaborative and nondirective supervisory approaches.

Table1.5: Chi-square tests for relationship between demographics and supervisory approaches among the teachers in secondary schools in Arua

Demograp hics	Supervisory approaches			χ^2	df	P	
	Directi ve	Collabora tive	Nondirecti ve				
Gender	Male	158	121	129	0.0043	2	0.979
	Female	73	56	62			
Age (years)	25-29	70	49	52	0.9140	6	0.989
	30-34	76	59	64			
	35-39	60	46	51			
	40-49	25	23	24			
Teacher's qualification	Dip. Ed	94	65	67	4.5630	6	0.601
	BED	120	102	112			
	PGDE	7	4	2			
	MED	10	6	10			
Teaching experience	0-5 years	86	60	66	0.627	4	0.960

	6-10 years	74	59	62			
	Above 10 years	71	58	63			
School status	Gov't aided	161	127	140	0.676	2	0.713
	Private	70	50	51			
School location	Arua City	142	113	127	1.141	2	0.565
	Arua district	89	64	64			

The chi-square test represented in the table above shows a positive relationship between the respondents' demographics and the application of the various approaches of developmental supervision.

Interview results on the dimensions of developmental supervision applied by school-based supervisors in secondary schools in Arua

Interview with the school supervisors which included the head teachers and deputy head teachers incharge academic affairs in the schools revealed that supervisors used directive, collaborative and non directive supervision approaches.

During an interview, one of the head teachers revealed that the type of supervision feed back depends on the teacher's experienced and what kind of data collected during lesson observation. For the novice and struggling, teachers the supervisors acknowledged applying directive supervision.

“The feedback depends on that experience which you had with the teacher in the class. And definitely the tone with the younger teacher, a newly qualified teacher seek to guide him or her on wha to do in order to improve aspects of teaching. encourage him to encourage him.” She explained.(KII, 7/3/2023).

Another deputy head teacher had this to say *“for newly qualified teachers we encoutage them through making sugestions on how they can do better. We give them alternative solutions to ways of improving their teaching and learning process (KII, 9/3/2023).*

The participants also agreed that they applied collaborative supervisory approach to average teachers. In this case, they shared the decision making process with the supervisees. One head teacher had this to say: *You try to come up with some possible measures of how he could become a better person, in order to improve next time. You also inquire from him how he could evaluate himself if he was the one to evaluate and how he can improve. (KII, 10/3/2023).*

On non directive supervision, the interview participants revealed that they applied directive supervisory approach to teachers who are able to make judgment of their teaching and provide solutions to instructional challenges with minimal support from the supervisors. These are teachers who have achieved the level of autonomy. *“as a supervisor, we not dictate on teachers who are able to manage their teaching learning process. We only give minimal guidance to these teachers.”* (KII, 10/3/2023).

DISCUSSION

The findings revealed that supervisors used all the three dimensions of developmental supervision. According to Glickman et al., (2010), the supervisor may use either directive, collaborative or nondirective supervision approach depending on the developmental level of the teacher. Thus, supervisors choose supervisory approach depending on the teacher's needs and abilities. To reinforce the above assumption, (Hoque, Kenayathulla, Subramaniam, and Islam, (2020) categorised teachers into four groups. In the first category are teachers who rely on their supervisors to provide solutions to their instructional challenges; secondly are teachers who would want to work jointly with their supervisor to mitigate instructional challenges; in the third group are teachers who regard their supervisors as resources to rely on and the fourth category are teachers who want to attain autonomy in handling instructional challenges and professional development.

From the study, data revealed that the majority of teachers (count=231) agreed that their supervisors used mostly directive supervision approach. This is followed by non-directive supervision (count=191) and the least number of teachers (count=177) agreed that their supervisors used collaborative supervision approach. All in all, the results show that there is equal engagement in the directive, collaborative and nondirective supervisory approaches. According to Glickman et al., (2010), the rationale of developmental supervision is for teacher's professional growth, and thus supervisory approach should be based on the conceptual level of the teacher.

Data from interviews with head teachers and deputy head teachers also concur with the quantitative findings that supervisors apply all the three approaches of developmental supervision almost at the same level, with directive supervision commonly applied.

The findings are congruent with Hoque, Kenayathulla, Subramaniam, and Islam, (2020) who found out that supervisors applied directive, collaborative and nondirective approaches while supervising different categories of teachers. The study found out that supervisors use directive approach to novice teachers to strengthen their instructional abilities. Moreover, the supervisors used collaborative approach to teachers who could suggest solutions to mitigate instructional problems, and nondirective approach to teachers who could solve instructional problems independently. Similarly, Strieker, Adams, Cone, Hubbard, and Lim, (2016) found out that supervisors used all the three approaches of developmental supervision. Similarly, Karnati, (2019) found out that principals implemented directive, nondirective and collaborative supervision depending on the needs of the teachers. He

posited that directive approach is applied to teachers who are low conceptual level. Collaborative supervision on the other hand was used with teachers who are knowledgeable and energetic, through presenting, explaining, listening, solving problems and negotiating. Non directive supervision was applied to teachers who expressed high conceptual skills and autonomy during instructional process.

These findings are similar to what school-based supervisors expressed in the current study that they applied different approaches of developmental supervision according to the years of experience and level of competence expressed during the lesson. This is in line with Glickman et al., (2010) who suggest that in applying developmental supervision, the supervisors needs to identify the teachers' current conceptual level and provide appropriate feedback and support that facilitates their professional growth to the next level.

The results revealed that most supervisors used directive supervision as opposed to either collaborative or nondirective. A study by Karnati (2019) on the academic supervision that improves competence of elementary teacher, it was found out that most supervisors used directive supervision more frequently than collaborative and nondirective supervisory approach. However, this is contrary to Strieker, Adams, Cone, Hubbard, & Lim, (2016) that more than half of evidence documented the use of nondirective supervision approach as opposed to less than half of evidence that documented the use of collaborative and directive approaches. Additionally, Wiyono & Rasyad, (2021) discovered that few supervisors in Indonesia did not engage in collaborative approach of supervision.

The variation in the findings could have come because of difference in supervisor's philosophical orientation and the characteristics of employees in that some supervisors who believe in theory X tend to apply directive supervision to novice or less motivated employees while theory Y supervisors use non-directive to experienced or more motivated employees. Therefore, since employee performance depends on motivation, supervisory approach should be adopted depending on the environment, situations and individuals involved (Stephen, 2020). From the findings, school-based supervisors in the greater Arua as encouraged to provide developmental supervision so that teachers may gain support to improve instructional practice.

CONCLUSION

Data from interviews with head teachers and deputy head teachers also concur with the quantitative findings that supervisors apply all the three approaches of developmental supervision almost at the same level, with directive supervision commonly applied. By applying mostly directive supervision, the findings concur with the assumption of theory X, where supervisors coerce teachers who seem to be lazy and demotivated to perform tasks assigned to them. The findings also revealed that supervisors also apply theory Y to teachers who are motivated and willing to take up responsibilities willing through the application of collaborative and nondirective supervisory approaches.

RECOMMENDATIONS

1. Ministry of educational and sports should create institute of educational leadership and management to train persons who may wish to take leadership and management pathways, since the time allocated during initial training is not adequate.
2. Supervisors should apply supervisory approaches depending on the developmental level of the teachers.
3. Instructional supervision should not be treated as a weapon for destruction but as a tool for teacher professional development.
4. Ministry of education and schools should organise regular continuous professional development workshops and seminars for school-based supervisors on instructional supervision.

Implications of the Study

Instructional supervision is significant in enhancing teacher competence when conducted professionally. School-based supervisors are therefore encouraged to adopt a developmental approach of supervision depending on the teacher's experience. Novice teachers with less experience in teaching need a more directive approach while collaborative and nondirective should be applied to the moderately and more experienced teachers respectively.

Contribution to New Knowledge

The major contribution of this study is to the body of knowledge is that developmental supervision improves teacher competence. When teachers' competence is improved then there is a possibility that the way they teach would change which improves learner's performance in curricular and co-curricular activities.

Proposed areas of future research

- The relationship between supervisor's training and the quality of supervision in secondary schools in Uganda.
- The relationship between school-based supervision and teacher role effectiveness in secondary schools in Uganda

REFERENCES

- Ampofo, S. Y., Onyango, G. A., & Ogola, M. (2019). Influence of school heads' direct supervision on teacher role performance in public senior high schools, Central Region, Ghana. *IAFOR Journal of Education*, 7(2), 9–26. <https://doi.org/10.22492/ije.7.2.01>
- Apriliyanti, D. L. (2020). Enhancing Teachers' Competencies through Professional Development

Program: Challenges and Benefactions. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, 5(1), 28–38. <https://doi.org/10.35974/acuity.v5i1.2042>

Brankaert, R., Ouden, E. Den, Buchenau, M., Suri, J. F., de Valk, L., Bekker, T., ... Bozarth, M. A. (2009). Experiential Probes: probing for emerging behavior patterns in everyday life. *International Journal of Design*, 9(1), 2880–2888. <https://doi.org/10.1017/S1041610297004006>

Brenner, M. E. (2006). Interviewing in educational research. *Handbook of Complementary Methods in Education Research*, 357–370.

Creswell, J W. (2009). *Research Design- Cresswell 3rd Ed.pdf*. London: SAGE Publications.

Creswell, John W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). London: SAGE Publications Ltd.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. (2010). *SuperVision and Instructional Leadership: A Developmental Approach, 8th Edition* (Eighth edi). Boston: Pearson.

Gloria, N., Nonye, C., & Gloria, N. (2016). *The Impact of Supervision of Instruction on Teacher Effectiveness in Secondary Schools in Nigeria*. 3(3).

Goodwin, W. L., & Goodwin, L. D. (1996). *Understanding Quantitative and Qualitative Research in Early Childhood Education*. Teachers College Press.

Haas, M. De, & Frankema, E. (2016). *Tracing the the uneven diffusion of missionary education in colonial Uganda: European influences , African Realities and the pitfalls of Church record data. African economic history working paper series*. Sweden.

Hall, J. N. (2013). *Pragmatism, Evidence, and Mixed Methods Evaluation*. (138), 15–26. <https://doi.org/10.1002/ev>

Hattangadi, V. (2014). *Theory X & Theory Y*. 2(4), 20–21.

Hoque, K. E., Banu, H., Kenayathulla, B., Subramaniam, M. V. D. O., & Islam, R. (2020). *Relationships Between Supervision and Teachers ' Performance and Attitude in Secondary Schools in Malaysia*. <https://doi.org/10.1177/2158244020925501>

Hoque, K. E., Bt Kenayathulla, H. B., D/O Subramaniam, M. V., & Islam, R. (2020). Relationships Between Supervision and Teachers' Performance and Attitude in Secondary Schools in Malaysia. *SAGE Open*, 10(2). <https://doi.org/10.1177/2158244020925501>

Ibrahim, A. (2018). Directive, collaborative, or non-directive? Thesis supervision approaches in the United Arab Emirates. *Issues in Educational Research*, 28(3), 679–700.

- Ingleby, E., Cohen, L., Manion, L., & Morrison, K. (2012). Research Methods in Education. In *Professional Development in Education* (5th ed., Vol. 55). https://doi.org/10.1111/j.1467-8527.2007.00388_4.x
- Ssekamwa J. C., & Lugumba, S. M. E. (2001). *Development and Administration of Education in Uganda* (2nd ed.). Kampala, Uganda: Fountain Publishers.
- Kalule, L., & Bouchamma, Y. (2014). Teacher supervision practices and characteristics of in-school supervisors in Uganda. *Educational Assessment, Evaluation and Accountability*. <https://doi.org/10.1007/s11092-013-9181-y>
- Kangwa, D. (2018). Effective Teaching Practice - A Bridge between Theory and Practice in Teacher education: A Case of Evelyn Hone College. *The International Journal of Multi-Disciplinary Research*, 1–22.
- Karnati, N. (2019). *Academic Supervision To Improve The Competence Of Elementary School Teachers*. 35(1).
- Kaushik, V., & Walsh, C. A. (2019). *Pragmatism as a Research Paradigm and Its Implications for Social Work Research*.
- Komakech, R. A., & Osuu, J. R. (2014). *Uganda SESEMAT Programme : Impact and Challenges in its Implementation*. 2(6), 133–146.
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). New Delhi: New Age International (P) Limited Publishers.
- Kumar, R. (2014). *Research Methodology: A Step-by-Step Guide for Beginners*. Retrieved from <https://books.google.co.uk/books?id=MKGVAgAAQBAJ>
- Lapan, S. D., Quartaroli, M. T., & Riemer, F. J. (2011). *Qualitative Research: An Introduction to Methods and Designs*. John Wiley & Sons.
- Lating, P. (2009). *Hybrid e-learning for rural secondary schools in Uganda: Co-evolution in triple helix processes*. 16, 47,124,135,161,204. Retrieved from <http://swepub.kb.se/bib/swepub:oai:bth.se:forskinfo6DC42C7F202024C3C12575390037E3E4?vw=full&tab2=abs>
- Malunda, Onen, Musaazi John C.S., O. J. (2016). Instructional Supervision and the Pedagogical Practices of Secondary School Teachers in Instructional Supervision and the Pedagogical Practices of Secondary School Teachers in Uganda. *Journal of Education and Practice*, 7, No(October), 177–187.

- Malunda, P., Onen, D., & Oonyu, J. (2016). *Teacher Evaluation and Quality of Pedagogical Practices Teacher Evaluation and Quality of Pedagogical Practices*. (August).
- Manser, T., & Mitchell, L. (2012). Strengths and Weaknesses of Specific Interview Methods and Qualitative Data Analysis Strategies in Identifying Team Performance Requirements. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 56(1), 840–844. <https://doi.org/10.1177/1071181312561176>
- Martyn, D. (2007). *The Good Research Guide research projects for small-scale* (3rd ed.). Bershire, England: Open University Press.
- Marzano, R. J., Tony, F., & David, L. (2011). *Effective Supervision: Supporting the Art and Science of Teaching* (1st ed.). Alexandria, Virginia USA: ASCD 2011.
- Maxwell, J. A., Creswell, J. W., & Stringer, E. T. (2009). *Qualitative Research Design / Research Design / Action Research*. Retrieved from <https://books.google.co.ug/books?id=S3iimgEACAAJ>
- MOES. (2019). The National Teacher Policy. In *The Lancet*. [https://doi.org/10.1016/S0140-6736\(54\)91203-9](https://doi.org/10.1016/S0140-6736(54)91203-9)
- Morgan, D. L. (2014). Pragmatism as a Paradigm for Social Research. *Qualitative Inquiry*, 20(8), 1045 –1053. <https://doi.org/10.1177/1077800413513733>
- Moswela, B. (2010). Instructional Supervision in Botswana Secondary Schools: An Investigation. *Educational Management Administration & Leadership*, 38(1), 71–87. <https://doi.org/10.1177/1741143209351811>
- Nzabonimpa, Buregeya, J. (2009). *Influence of Head teachers' General and Instructional Supervisory Practices on Teachers' Work Perfrmance in Secondary Schools in Entebbe Municipality, Wkiso District, Uganda*. Bugema University.
- Odama, J. (2019, September 2). *Head teachers to blame for poor performance in Arua schools*. Retrieved from <https://www.westnileweb.com/news-a-analysis/arua/head-teachers-to-blame-for-poor-performance-in-schools>
- Okunia, L., Ayikoru, J., & Naluwemba, F. (2019). *School Culture and Teacher Motivation: A Case of Secondary Schools in Arua Municipality, Arua District, Uganda*. Kyambogo University.
- Olorode, O. A., & Adeyemo, A. O. (2012). *Educational Supervision: Concepts and Practices with reference to Oyo state, Nigeria*. 20(1), 1–9.
- Oyeyemi, K. (2013). Application of Theory X and Y in classroom management. *International*

Journal of Education and Research, 1(5), 1–10.

Ozyildirim, G. (2016). *An Investigation on Developmental Supervision Model : Supervisors ' and Administrators ' Opinions and Teachers ' Expectations **. 6(3).

<https://doi.org/10.6007/IJARBS/v6-i3/2055>

Republic of Uganda. (1992). *Government White Paper on Implementation of the Recommendations of the Report of the Education Policy Review Commission Entitled "Education for National Integration and Development"*. Kampala.

Samoei, C. J. (2014). *Instructional Supervisory Role of Principals and its Influence on Students ' Academic Achievement in Public Secondary Schools in Nandi North District Nandi County Kenya.*

Samuel, A. O., & Adekunle, A. O. (2019). *Teacher Preparation and Teaching Professional Competence among Federal Colleges of Education Graduates in South West-Nigeria.* 8(1), 93–105. <https://doi.org/10.15640/jehd.v8n1a11>

Shulman, V., Sullivan, S., & Glanz, J. (2008). The New York City school reform: Consequences for supervision of instruction. *International Journal of Leadership in Education, 11(4)*, 407–425. <https://doi.org/10.1080/13603120802183905>

Ssekamwa, J. C. (1997). *History and Development of Education in Uganda* (2nd, illustr ed.). Kampala: Fountain Publishers.

Stark, M. D., Mcghee, M. W., & Jimerson, J. B. (2017). *Reclaiming Instructional Supervision : Using Strategies to Promote Teacher Development.* <https://doi.org/10.1177/1942775116684895>

Stephen, B. (2020). *Practical Application of Theory X & Y Management Approaches : Sixty Years on. Chartered Project Professional Practical.*

Strieker, T., Adams, M., Cone, N., Hubbard, D., & Lim, W. (2016). Supervision matters : Collegial , developmental and reflective approaches to supervision of teacher candidates. *Cogent Education, 32.* <https://doi.org/10.1080/2331186X.2016.1251075>

Tsui, M., O'Donoghue, K., Boddy, J., & Pak, C. (2017). From Supervision to Organisational Learning: A Typology to Integrate Supervision, Mentorship, Consultation and Coaching. *The British Journal of Social Work, (November 2016)*, 1–15. <https://doi.org/10.1093/bjsw/bcx006>

Tyagi, R. S. (2010). School-based instructional supervision and the effective professional development of teachers. *Compare: A Journal of Comparative and International Education, 40(1).* <https://doi.org/10.1080/03057920902909485>



UNEB. (2014). *National Assessment of Progress in Education: The Achievement of S2 Students in English language, Mathematics and Biology*. Kampala.

UNEB. (2019). *UCE 2019 Summary of District Performance*. Kampala.

Wahdini, E., & Saleh, M. (2020). *Supervision and Participation in Teachers Working Group Toward the Teachers ' Professional Competence*. 2(4), 292–300.
<https://doi.org/10.11594/jk6em.02.04.04>

Wanzare, Z. (2012). Instructional Supervision in Public Secondary Schools in Kenya. *Educational Management Administration & Leadership*, 40(2), 188–216.
<https://doi.org/10.1177/1741143211427977>

Wiersma, W. (2005). *Research methods in education: an introduction* (8th ed). Boston: Pearson/A and B.

Wilson, E. (2009). *School-based research: a guide for education students* (1st ed). Thousand Oaks, CA: Sage.

Wiyono, B. B., & Rasyad, A. (2021). *The Effect of Collaborative Supervision Approaches and Collegial Supervision Techniques on Teacher Intensity Using Performance-Based Learning*.
<https://doi.org/10.1177/21582440211013779>