

**INSTRUCTIONAL SUPERVISION AND TEACHER
COMPETENCE IN SECONDARY SCHOOLS IN GREATER
ARUA, UGANDA**

**POLYCARP OMARA
MED (AKU), BED (KYU), DES (ITEK)
17/U/14380/GDED/PE**

**A DISSERTATION SUBMITTED TO THE DIRECTORATE OF
RESEARCH AND GRADUATE TRAINING IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE
AWARD OF THE DEGREE OF DOCTOR OF
PHILOSOPHY IN EDUCATION OF
KYAMBOGO UNIVERSITY**

OCTOBER, 2025

DECLARATION

This dissertation is my original work and has not been submitted for a degree at any other university.

Signature : _____ Date : _____

APPROVAL

As university supervisors, we confirm that the candidate completed this work under our supervision.

Signature: _____ Date: _____

Dr. Frances Naluwemba

Supervisor

Signature: _____ Date: _____

Rev. Fr. Dr. John Bosco Ssetumba

Supervisor

DEDICATION

I dedicate this dissertation to my wife and children for their moral support during the course of my studies. You are such a great family. May the Almighty God bless you all.

ACKNOWLEDGEMENT

Glory to God Almighty for He made it possible for this academic journey to get this far. I express my sincere gratitude to my research supervisors, Dr. Frances Naluwemba and Rev. Fr. Dr. John Bosco Ssetumba, for their invaluable patience and professional guidance throughout this journey. I also could not have undertaken this journey without support from the Dean School of Education Ass. Prof. George W. Kasule and his gallant team. Special gratitude goes to the Head of the Department of Educational Planning and Management, Dr. Joseph Rwothumio, and his team for unwavering support. Additionally, this endeavour would not have been possible without the generous support from Muni University management.

I am also grateful to my classmates and friends for their dedicated support, including the late-night feedback sessions and moral support. Thanks should also go to the head teachers of secondary schools in Greater Arua, Research Assistants and study participants who supported and inspired me.

I want to commend my family, especially my mother, brothers and sisters, my wife, and children. Their belief in me has kept my spirits and motivation high during this process. May God Almighty bless you abundantly. Amen!

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	xii
LIST OF FIGURES	xiv
LIST OF ABBREVIATIONS	xv
ABSTRACT	xvii
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction.....	1
1.1 Background to the study	1
1.1.1 Historical Perspective	2
1.1.2 Theoretical Perspective	9
1.1.3 Conceptual Perspective	10
1.1.4 Contextual Perspective.....	15
1.2 Statement of the problem	19
1.3 Purpose of the Study	21
1.4 Research objectives.....	21
2.5 Research Questions	22
2.6 Research Hypotheses	22
1.7 Significance of the Study	23
1.8 Justification of the Study	24
1.9 Scope of the Study	25

1.9.1 Geographical Scope	25
1.9.2 Content Scope	26
1.9.3 Time Scope	27
1.10 Conceptual Framework.....	28
1.11 Operational Definition of Key Terms	30
CHAPTER TWO: LITERATURE REVIEW.....	32
2.0 Introduction.....	32
2.1 Theoretical Review	32
2.2 Application of the dimensions of instructional supervision in secondary schools in Greater Arua	38
2.3 The status of Teacher competence in secondary schools in Greater Arua, Uganda.....	48
2.4 Directive Supervision and Teacher competence.....	60
2.5 Collaborative Supervision and Teacher Competence	69
2.6 Non-Directive Supervision and Teacher Competence.....	73
2.7 Chapter Summary	77
CHAPTER THREE: METHODOLOGY	79
3.0 Introduction.....	79
3.1 Philosophical Orientation.....	80
3.2 Research Approach	82
3.3 Research Design.....	83
3.4 Population and Sampling	85
3.4.1 Target Population.....	85
3.4.2 Sample Size and Sampling Techniques	85
3.4.2.1 Sample Size.....	85

3.4.2.2 Sampling techniques	86
3.5 Methods of Data Collection	88
3.5.1 Semi-Structured Interviews	88
3.5.2 Non-participant Observation.....	89
3.5.3 Survey	90
3.6 Research instruments	91
3.6.1 Semi-structured Interviews Guide	91
3.6.2 Non-participant Observation Schedule	92
3.6.3 Questionnaire	93
3.7 Validity and Reliability of Research Instruments.....	94
3.7.1 Validity of Research Instruments.....	94
3.7.1.1 Content Validity.....	95
3.7.1.2 Construct Validity	97
3.7.1.3 Face Validity.....	97
3.7.2. Reliability of Research Instruments.....	98
3.7.2 Trustworthiness in Qualitative Research	99
3.8 Data Collection Procedure	101
3.9 Data Management	102
3.10 Data Analysis	102
3.11 Research Dissemination.....	106
3.12 Ethical Considerations	107
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND	
INTERPRETATION	109
4.0 Introduction.....	109
4.1 Demographic Characteristics of Respondents	109

4.2 Objective One: Application of the dimensions of Instructional	
Supervision in Secondary Schools in Greater Arua, Uganda	115
4.2.1 Application of directive supervision in secondary schools in Greater	
Arua, Uganda	115
4.2.2 Application of collaborative supervision in secondary schools in	
Greater Arua, Uganda	121
4.2.3 Application of non-directive Supervision in secondary schools in	
Greater Arua, Uganda	126
4.3.0 Objective Two: Status of Teacher Competence in Secondary Schools	
in Greater Arua, Uganda	132
4.3.1 Status of Leadership Competence in secondary schools in Greater	
Arua, Uganda	134
4.3.2 Status of Professional Learning Competence in secondary schools in	
Greater Arua, Uganda	143
4.3.3 Status of Assessment Competence in Secondary Schools in Greater	
Arua, Uganda	151
4.3.4 Status of Technological Competence in Secondary Schools in	
Greater Arua	160
4.4 Objective Three: Relationship between directive supervision and	
teacher competence in secondary schools in Greater Arua	170
4.5 Objective Four: The Relationship between collaborative supervision	
and teacher competence in secondary schools in Greater Arua.....	172
4.6 Objective Five: The Relationship between Non-Directive Supervision	
and Teacher competence in Secondary Schools in Greater Arua.....	174

4.7 Regression Analysis for Instructional Supervision and Teacher competence	176
4.8 Summary	181
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND	
RECOMMENDATIONS	183
5.0 Introduction	183
5.1. Discussion of findings	184
5.1.1. Objective One: Application of the dimensions of instructional supervision in secondary schools in Greater Arua, Uganda.....	184
5.1.2 Objective Two: Status of Teacher Competence in Secondary Schools in Greater Arua, Uganda	194
5.1.3.1 Status of Leadership Competence in secondary schools in greater Arua, Uganda	195
5.1.3.2 Status of Professional Learning Competence in secondary schools in greater Arua, Uganda	202
5.1.3.3 Status of Assessment Competence in secondary schools in greater Arua, Uganda	209
5.1.3.4 Status of Technological Competence in secondary schools in greater Arua, Uganda	216
5.1.4 Objective Three: The Relationship Between Directive Supervision and Teacher competence in Secondary Schools in Greater Arua	224
5.1.6 Objective Five: The Relationship Between Non-Directive Supervision and Teacher Competence in Secondary Schools in Greater Arua	235
5.2. Conclusion	243

5.3 Recommendations.....	244
5.4 Limitations of the Study.....	246
5.5 Implications of the Study.....	248
5.6 Contribution to New Knowledge.....	250
5.6.1 Teacher Competence Model for Secondary Schools in Uganda	251
5.7 Suggestions for Further Research.....	254
REFERENCES.....	256
APPENDICES	298
Appendix 1 : Reliability Test Results for Questionnaire	298
Appendix 2 : Interview Schedule for Head Teacher and Deputy Head Teacher in Charge of Academics	300
Appendix 3: Non-Participant Lesson Observation Schedule.....	302
appendix 4: Questionnaire for Teachers	305
Appendix 5: Teachers’ Informed Consent Form for Survey	313
Appendix 6: Teachers’ Informed Consent Form for Lesson Observation.....	317
Appendix 7: Informed Consent Form for Interviews	321
Appendix 8: Measures for The Prevention and Control of The Risk of Spread of Covid-19 During the Implementation of Research..	325
Appendix 9: Kyambogo University Introductory Letter	329
Appendix 10: Gulu University Research Ethics Committee Approval Certificate	330
Appendix 11: Uganda National Council for Science and Technology Research Approval Certificate	331
Appendix 12: Similarity Index.....	333

LIST OF TABLES

Table 3. 1:Sample of Research Participants.....	88
Table 3. 2 : Content Validity Index Results	96
Table 3. 3: Reliability Coefficients Test Results for Questionnaire	99
Table 4. 1: Distribution of Respondents' Location (Survey)	110
Table 4. 2: Respondents' Location (Classroom Observation)	111
Table 4. 3 Respondents' School Type (Survey)	111
Table 4. 4: Participants' School Type (Classroom Observation)	112
Table 4. 5:Demographics Information on the Gender of Survey Respondents (Teachers)	112
Table 4. 6: Demographics Information on the Gender of Interview Participants	113
Table 4.7: Demographics Information on the Gender of Classroom Observation Participants (Teachers)	113
Table 4. 8: Teacher's Years of Teaching Experience- Survey	114
Table 4. 9: Teacher's Years of Teaching Experience- Classroom Observation	114
Table 4. 10: Descriptive Results on Directive Supervision	116
Table 4. 11: Coding of Interview Participants	118
Table 4.12: Descriptive Results on Collaborative Supervision Behaviour....	122
Table 4. 13: Descriptive Results on Non – Directive Supervision	127
Table 4.14: Application of the Dimensions of Developmental Supervision .	132
Table 4. 15: Codes Showing Demographics of Interview Participants	133
Table 4.16 : Descriptive Results on Leadership Competences.....	134

Table 4. 17 Cross Tabulation for Leadership Competence against	
Teaching Experience	139
Table 4.18: Descriptive Results on Professional Learning Competence	144
Table 4.19: Descriptive Results on Assessment Competence	152
Table 4.20: Cross Tabulation for Assessment of Competence Against	
Teaching Experience	156
Table 4.21: Descriptive Results on Technological Competence	161
Table 4. 22: Cross Tabulation for Technological Competence Against	
Teaching Experience	164
Table 4.23: Pearson's Correlation Between Directive Supervision and	
Teacher competence	171
Table 4. 24: Pearson's Correlation Coefficient Analysis for Collaborative	
Supervision and Teacher competence	173
Table 4.25: Pearson's Correlation Coefficient on Non-Directive	
Supervision and Teacher competence	175
Table 4.26: Model Summary for Instructional Supervision and Teacher	
competence	177
Table 4.27: ANOVA for Instructional Supervision and Teacher	
competence	179
Table 4.28: Regression Coefficients for Instructional Supervision and	
Teacher competence	180
Table 5.1: The Proposed Teacher Competence Framework for Secondary	
Schools	253

LIST OF FIGURES

Figure 1.1: Conceptual Framework indicating the relationships between instructional supervision and teacher competence.....	28
Figure 4.1: Histogram and Curve Showing the Distribution of Respondents on Directive Supervision	117
Figure 4.2: Histogram and Curve Showing the Distribution of Respondents on Collaborative Supervision	124
Figure 4.3: Respondents' Distribution on Non-Directive Supervision Illustrated by Histogram and Curve	129
Figure 4. 4: Histogram and Curve Illustrating Respondents' Leadership Competence.....	137
Figure 4.5: Histogram and Curve Showing the Distribution of Respondents on Professional Learning Competence	147
Figure 4.6: Histogram and Curve Showing the Distribution of Respondents on Assessment Competence	155
Figure 4.7: Histogram and Curve Showing the Distribution of Respondents on Technological Competence	163

LIST OF ABBREVIATIONS

AKU	Aga Khan University
ATL	Active Teaching and Learning
BTC	Belgium Technical Corporation
CPD	Continuous Professional Development
CBC	Competence-Based Curriculum
DEO	District Education Officer
DES	Directorate of Education Standards
DIS	District Inspector of Schools
FGD	Focus Group Discussion
GOU	Government of Uganda
GUREC	Gulu University Research Ethics Committee
ILT	Instructional Leadership Team
ITEK	Institute for Teacher Education, Kyambogo
KYU	Kyambogo University
LAC	Learning Action Cycle
MOES	Ministry of Education and Sports
NCDC	National Curriculum Development Centre
NTC	National Teachers' College
OECD	Organisation for Economic Co-operation and Development.
SDG	Sustainable Development Goals
SESEMAT	Secondary Science and Mathematics Teachers
SPSS	Statistical Package for Social Science
UACE	Uganda Advanced Certificate of Education

UCE	Uganda Certificate of Education
UNCST	Uganda National Council for Science and Technology
UNEB	Uganda National Examinations Board
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

ABSTRACT

In response to ongoing concerns about the quality of teaching in secondary schools, this study examined the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. The research was motivated by the pressing need to strengthen teacher competence in order to improve education outcomes. Specifically, the study examined how different supervisory approaches: directive, collaborative, and non-directive, influence teachers' competence. Adopting a pragmatist paradigm, the study employed a concurrent parallel mixed-methods design, combining both quantitative and qualitative techniques. Data were collected from a total of 261 participants, including 241 teachers, 10 deputy head teachers, and 10 head teachers, through surveys, interviews, and classroom observations. A combination of simple random and purposive sampling was used to select participants. Descriptive and inferential statistical methods, along with thematic analysis, guided data analysis. Results indicated that directive supervision was the most frequently practiced, followed by non-directive and then collaborative approaches. Teachers were generally strong in leadership and continuous professional learning, but showed weaknesses in assessment and technological competence. The findings revealed a statistically significant positive relationship between teacher competence and all three supervisory approaches: directive ($r = 0.144^{**}$, $p = 0.026$), collaborative ($r = 0.145^{*}$, $p = 0.024$), and non-directive ($r = 0.161^{*}$, $p = 0.012$). Based on these findings, the study concluded that instructional supervision plays a key role in enhancing teacher competence. It recommends that the Ministry of Education and Sports strengthen school-based supervision by investing in targeted capacity-building programs, including training workshops and seminars. School leadership is also encouraged to prioritise regular professional development focused on improving teachers' technological and assessment skills, which were found to be lacking.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The study investigated the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua. Critically, this research was prompted by the realisation that most teachers, particularly in underdeveloped nations such as Uganda, demonstrate a low degree of competence (Angundaru et al., 2016; Lating, 2009). This situation impedes progress toward achieving Sustainable Development Goal 4 (SDG 4), which focuses on providing quality education and promoting lifelong learning, including the enhancement of teachers' professional growth. This chapter outlines the study's background, problem statement, purpose, objectives, research questions, hypotheses, scope, and significance. In addition, it includes the study's conceptual framework.

1.1 Background to the study

Instructional supervision and teacher competence are essential to educational quality and learner outcomes. This is in line with the assertion that the quality of every educational system depends on the competence of its teachers (Angundaru et al., 2016; Nyakundi, 2020). While instructional supervision refers to the process through which educational leaders support, guide and assess teaching practices, teacher competence is the combination of a teacher's knowledge, skills, values, and attitudes that enable them to meet the demands of their job successfully (Akram et al., 2015; Yang et al., 2018). Accordingly, the significance of teacher competence in the professional activity of any teacher cannot be overstated, as competent teachers frequently

deliver lessons effectively and thereby improve student learning outcomes (Ahmad & Marah, 2017). However, scholars such as Malunda et al. (2016), Odama (2019), and Atuhurra and Kaffenberger (2022) demonstrate that not all teachers, particularly in developing nations, are capable of carrying out their professional responsibilities, such as classroom management, technology use, and student assessment, due to inadequate knowledge, skills and commitment. Thus, this study investigated the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

1.1.1 Historical Perspective

The historical relationship between instructional supervision and teacher competence reflects broader changes in how teaching itself is understood and valued. The relationship is intertwined, evolving alongside changes in education philosophy, policy and professional standards. In the pre-industrial era, particularly before the 19th century, instructional supervision was largely moralistic and religious (Glickman et al., 2010). Teachers were supervised by religious leaders or community elders, who evaluated them based on their ability to deliver religious doctrine and maintain moral discipline, rather than on pedagogical skills (Rury, 2005). With the expansion of education systems in Europe and North America during the 19th century, instructional supervision became more organised. Influenced by industrial models of management, supervision focused on standardisation, inspection, and accountability (Ngwenya, 2020). During this period, teacher competence was predominantly equated with subject matter knowledge and class control, with minimal emphasis on professional development or reflective teaching.

Taylor was among the earliest pioneers of the scientific management era to explore how professional competence influences work performance through his experiment on time and motion (Sandberg & Pinnington, 2009; Mulder, 2014). He underscored the importance of employee training, systematic task analysis by managers to enhance efficiency, fostering positive relations with workers, and exercising close supervision to guarantee the accurate and timely completion of assigned tasks (Huang et al., 2013). Max Weber, a German sociologist, developed a bureaucratic approach that emphasised hierarchical organisation and a distinct assignment of authority (Olaewaju & Olusoji, 2014). Weber believed that establishing clear rules and standards would enhance the competence and productivity of workers.

The 20th century witnessed a fundamental shift in approaches to instructional supervision. The emergence of clinical supervision, promoted by scholars such as Morris Cogan and Robert Goldhammer, emphasised reflective practice, observation and feedback. This approach viewed supervision as a tool for professional development rather than just compliance (Bello & Olaer, 2020). Simultaneously, teacher competence evolved to include not only knowledge and instructional skills but also professional judgement, adaptability and learner-centred practices. The progressive movement and constructivist theories influenced this change by prioritising collaboration, learner engagement and active methodologies (Weymes, 2004). Similarly, Elton concluded in his Hawthorne research that workers' competence and output rose when collaboration was taken into account (Bruce & Nyland, 2011).

Although the classical approaches were criticised in a variety of ways, such as their rigidity and top-down approaches to managing employees, their underlying ideas were incorporated into education systems in the United States and other countries to explain how employee competence and productivity could be enhanced (Jonghun, 2018). In his 1916 book “Democracy and Education,” John Dewey emphasised the necessity of competence as a prerequisite for doing a job . Similarly, in the early 1900s, specialists in agriculture education who had examined agriculture education in the United States and Canada highlighted worries about the competence of teachers in their report (Mulder, 2014). They encouraged the adoption of strategies that enhance employee competence.

In recent decades, supervision has become an element of instructional leadership, where school leaders actively support teachers through mentoring, coaching and collaborative planning (Zepeda et al., 2020). The strong link between competence and professional practice led to the global rise of the competence movement and the use of supervision as a means of assessing teachers (Kasule et al., 2015). International frameworks such as those developed by OECD and UNESCO emphasise the importance of continuous professional development and competency-based education (OECD, 2013). Supervision today is embedded in collaborative cultures involving Professional Learning Communities (PLC), where leaders and teachers jointly examine students’ data, plan lessons and evaluate instructional methods (de Nazaré et al., 2020). In this era, teacher competence is seen as an integration of pedagogical knowledge, technological skills, inclusive practices, and lifelong learning (Mariscal et al., 2023).

In most African countries, the colonial era established education systems that mirrored those of colonial powers. Instructional supervision was hierarchical, rigid, and designed to enforce the colonial curricula. Teachers were often assessed based on obedience and ability to transmit rote knowledge rather than critical thinking and creativity. Following independence in the mid-20th century, African governments emphasised education as a tool for national development. However, the colonial supervision structures, which were largely bureaucratic and punitive, persisted, with limited professional development opportunities, thus affecting human capital development (Haas & Frankema, 2016).

Today, contemporary African policies increasingly advocate for school-based supervision, peer mentoring and capacity-building initiatives (Ngwenya, 2020). With support from international development agencies, many countries have adopted teacher competency frameworks to guide recruitment, professional development, and performance appraisal (Ng et al., 2023). Despite these efforts, challenges such as high-pupil ratios, under-resourced schools, and weak inspection mechanisms continue to impede progress in effective instructional supervision. In many African countries, such as Nigeria, contextual differences posed significant challenges to the transfer and universal application of these approaches (Olaewaju & Olusoji, 2014). Inadequate teacher curriculum and questionable supervisor competence have also hindered the growth of teacher competence in the majority of African nations, such as Ghana, Nigeria, and Kenya. In Ghana, it was found that head teachers allocated very little time to supervise lesson preparation and delivery (Ampofo et al., 2019). The study recommended that

Ghana's education service should use proof of supervision as evidence for the promotion of head teachers.

On the other hand, Nonye and Njideka (2016) found that in Nigeria, supervisors exhibited inadequate supervisory skills and recommended workshops and seminars for both supervisors and teachers to enable them to become knowledgeable on how to conduct adequate instructional supervision. Similarly, Akinfolarin (2017) noted that academic supervision was affected by many factors, including inadequate supervision and supervision feedback and thus encouraged supervisors to improve the frequency of supervision in order to improve the instructional tasks of teachers. In Kenya, despite the importance of supervision in enhancing the quality of teachers, Wanzare (2012) found inconsistencies and questionable supervisors' practices to be significant challenges that affected supervision. To improve teacher quality, he, therefore, recommended the provision of objective feedback and follow-up support by school principals and quality assurance officers. From the above, it is essential to note that many attempts have been made to enhance teacher competence, including teacher training, mentorship, coaching and support supervision.

In Uganda, the importance of teacher competence has been emphasized since the establishment of missionary education in 1877. At the time, top-performing students were appointed as teachers without receiving formal teacher training (Ssekamwa, 1997). As a result, many of these teachers lacked the professional competence needed to effectively plan, deliver, and assess students' learning outcomes. Instructional supervision was conducted by inspectors tasked with enforcing compliance with the colonial

curriculum and maintaining discipline (Ssekamwa & Lugumba, 2001). During this period, teacher competence was narrowly defined as the ability to deliver content and adhere to Christian values, with minimal pedagogical training (Haas & Frankema, 2016).

Over time, as stated by Haas and Frankema (2016), missionaries introduced formal teacher education programs to better prepare those who would teach in their schools. This initiative aimed at enhancing teachers' professional competence. Teachers' work was monitored and evaluated by missionary inspectors who acted as external supervisors, with the goal of improving instructional quality. According to Ssekamwa and Lugumba (2001), although missionaries played a supervisory role, the Phelps-Stokes Commission reported that schools were inadequately supervised due to shortages of skilled personnel. As a result, it recommended the creation of a Department of Education to strengthen supervision and ensure effective oversight. After gaining independence in 1962, the inspectorate system continued, with supervisors emphasising administrative tasks and record keeping. The Education Acts of 1970 and 2008 mandated that inspectors oversee schools and classroom activities to support teachers in improving their professional knowledge and skills (MOES, 2008). However, after the formation of the Education Review Commission in 1987 to assess the overall education system, it was revealed that many teachers lacked both professional and pedagogical competence. Consequently, the 1992 Government White Paper on Education emphasised the need to strengthen supervisory structures and personnel responsible for monitoring and improving teacher performance (Republic of Uganda, 1992). During this period, Teacher Training Colleges

(TTCs) and National Teacher Colleges (NTCs) expanded, but teacher competence was still framed mainly around content mastery and classroom management, rather than reflective practice and innovation.

The implementation of Universal Primary Education (UPE) in 1997 and Universal Secondary Education (USE) in 2007 resulted in a substantial increase in student enrollment, which in turn exerted considerable pressure on both teacher quality and the existing supervision systems. This led to the establishment of the Directorate of Education Standards (DES) within the Ministry of Education and Sports (MOES), tasked with inspection and quality assurance. Similarly, the creation of the National Teacher Policy (2019) and the National Teacher Competency Framework (NTCF) aimed at professionalising teachers and ensuring standards for teacher performance (MOES, 2019).

Despite efforts by critical stakeholders through training, inspection and instructional supervision, teachers have been reported to exhibit a low level of competence in classroom management, content coverage and use of modern technologies in teaching (Lating, 2009; Ntege et al., 2023; Okia et al., 2021; Republic of Uganda, 2010). According to the National Teacher Policy, the poor quality of teachers remains one of the key challenges undermining the delivery of quality education in most Ugandan secondary schools (MOES, 2019). Additionally, there is a lack of coherence between curriculum standards, national examinations, and actual classroom teaching, which further hampers effective instruction (Atuhurra & Kaffenberger, 2022). This historical progression highlights the ongoing efforts to refine our

understanding of the strategies that school-based supervisors can employ to strengthen teacher competence in evolving educational landscapes.

1.1.2 Theoretical Perspective

This study was guided by Instructional Leadership Theory as advanced by Hallinger and Murphy (1985). The theory underscores the central role of school leaders in influencing the quality of teaching and learning within schools. According to this perspective, instructional leaders foster effective teaching by articulating a clear school mission, managing curriculum and instruction, and nurturing a positive and supportive school learning climate (Ismail et al., 2018). Leaders are tasked with providing direction, ensuring instructional quality, and cultivating a culture of continuous professional growth among teachers. In this framework, instructional supervision is conceived as a deliberate process through which school leaders observe, mentor, and support teachers in their professional development, thereby enhancing classroom practices and ultimately improving student learning outcomes. One of the key assumptions of instructional leadership is that teacher competence is crucial for students' success, and leaders can influence teacher effectiveness through direct and indirect support. This is because teachers' instructional practices, professional skills and their overall teaching competence are the foundation upon which quality education is built. Thus, enhancing teacher competence is not a one-time event but an ongoing process that involves systematic, continuous, and supportive supervision.

The relationship between instructional supervision and teacher competence, when viewed through the lens of instructional leadership, highlights the key roles that school leaders play in the professional

development of teachers. Instructional supervision that is collaborative, reflective, and data-driven promotes the development of teacher competence in secondary schools. Instructional leadership is, therefore, a key factor that creates a school culture that supports growth, high teaching standards and improved student learning outcomes. Therefore, this study adds to the body of knowledge by illustrating how instructional leadership practices shape the development of teacher competence in secondary schools within the Greater Arua region of Uganda. It highlights the critical role of supervision and leadership in enhancing teachers' professional growth, instructional effectiveness, and overall educational quality.

1.1.3 Conceptual Perspective

In this study, the key focus was on teacher competence and instructional supervision. According to Armstrong (2010), competence refers to an individual's capacity to perform a specific task or role to a defined standard that aligns with organizational objectives. This capability depends not only on one's knowledge and skills but also on attitudes, values, motivations, and beliefs. In the educational context, Muñiz-rod  guez et al. (2017) describe competence as the combination of knowledge, skills, and attitudes that enable teachers to design and implement effective instructional practices across various levels. Additionally, factors such as a teacher's academic qualifications, teaching experience, and classroom behavior further contribute to overall professional competence (Nyakundi, 2020). According to Afema (2016), teacher competence includes professional, pedagogical, personality, and social competence. Relatedly, Irina (2011) described teacher competence as knowledge and skills measured by the teacher's leadership, professional

competence, pedagogic competence, personality, and social competence. From the above definitions, competence is conceptualised as the capacity of an individual to execute a task depending on their knowledge, skills and attitude. This study employed Caena's (2014) definition of teacher competence as the level of a teacher's leadership, professional learning, assessment, and technological competence. These characteristics are common in the above definitions and pertain to the professional elements of Ugandan secondary school teachers. In this study, teacher competence is the process of improving teachers' knowledge and skills in how they provide instructional leadership, integrate technology, collaborate with peers and effectively design assessment tasks.

According to Chemodanova et al. (2022), leadership competence is conceptualised as a change in personal and professional characteristics that provide a new level of needs and readiness for an individual to influence others' actions. Accordingly, Subandi et al. (2020) assert that a teacher who is competent should be capable of creating an engaging and effective learning environment while managing the classroom in a way that optimizes student learning outcomes. This implies that a teacher must possess a combination of knowledge, skills, and attitudes that empower them to provide effective leadership throughout the teaching-learning process. In this study, leadership competence is conceptualised as a teacher's ability to set instructional climate, organise learning environment and manage learner disruptive behaviours to heighten student learning outcomes.

Professional learning refers to a teacher's capacity to participate in activities that enhance their knowledge, skills, and instructional practices,

ultimately improving student academic achievement. According to Guskey (2014), professional learning competence involves a teacher's knowledge and skills in planning his/her learning activities, conducting action research and engaging in reflective practice to improve student learning outcomes. Pa (2023) contends that professional learning is achieved when teachers form a Learning Action Cycle (LAC), whereby teachers reflect and learn from peers and supervisors. In this study, professional learning competence is referred to as the ability of the teacher to collaborate with colleagues, join a professional learning community and learn from reflection and classroom observation data.

In education, a teacher is expected to possess knowledge, skills and desired attitudes to conduct assessments and provide continuous feedback that can enhance student learning. Thus, Wolterinck et al. (2022) defines assessment competence as the teacher's ability to use a variety of assessment strategies and use assessment results to improve student learning outcomes. In this study, assessment competence is the ability of the teacher to design, administer assessment tasks and report student learning outcomes. A teacher should also possess technological competence. Technological competence refers to the ability to efficiently utilise digital tools and applications within various contexts (Arballo et al., 2019). This study conceptualises technological competence as the teacher's capability to use both traditional and modern resources in producing and transferring knowledge. Thus, as emphasised by de Nazaré et al. (2020), these competence are improved through instructional supervision.

In the field of education, supervision generally involves the ongoing guidance provided by school administrators and educational specialists to teachers (Olorode & Adeyemo, 2012). Wiyono and Rasyad (2021) define educational supervision as the process of supporting teachers to enhance both the quality of teaching and student learning outcomes. Similarly, Moswela, (2010), Wayne and Forsyth (2009) describe instructional supervision as evaluating a teacher's performance with the aim of helping them reflect on and improve classroom practices. Given the variety of interpretations of instructional supervision, numerous methods and models such as scientific, human relations, and clinical supervision, have been explored and debated (Ozyildirim, 2016).

More recently, Glickman and colleagues proposed the developmental supervision model, which emphasizes adapting supervisory communication and engagement according to the professional needs of the teacher (Glickman et al., 2010; Strieker et al., 2016). For the purposes of this study, instructional supervision is conceptualized following Glickman et al. (2010) as the process of assisting teachers to improve instructional practices through one of three approaches: directive supervision, collaborative supervision, or non-directive supervision. It emphasises adapting supervisory strategies based on the teacher's needs, ranging from directive behaviours for novice teachers to facilitative approaches for Expert teachers and self-directed educators (Ngwenya, 2020). The model also takes into account the teacher's level of commitment to professional growth. This personalised approach aims to foster teacher development, enhance their skills, and ultimately improve student outcomes.

Directive supervision refers to a supervisory approach where the supervisor provides clear instructions, guidance, and oversight, often with a focus on compliance and adherence to established protocols or standards (Warwick et al., 2023). This approach is characterised by a top-down communication style, where the supervisor directs the actions of the supervisee (Rankine, 2019). According to Ozyildirim (2016), directive supervision is applied to teachers who exhibit a low level of competence to support their professional growth. Directive supervision in this study is when the supervisor uses direct control, standardisation and evaluation of the assigned tasks.

The collaborative supervision model is characterized by a cooperative approach in which the supervisor works alongside the teacher to address instructional challenges without enforcing rigid directives (Silva & Dana, 2001). The primary goal of this model is to foster a partnership between the supervisor and the teacher, enabling them to jointly identify problems and develop effective solutions to enhance teaching and learning (Hoque et al., 2020). In this study, collaborative supervision involves negotiation, co-reflection, and shared responsibility between the supervisor and the teacher. Similarly, nondirective supervision, as a concept within the broader field of supervision, emphasises the supervisor's role in facilitating rather than directing the supervisee's personal growth and self-directed learning (Hoque et al., 2020). In the context of this study, non-directive supervision refers to a situation where the teacher is given more control by encouraging and engaging in self-reflection and problem-solving.

1.1.4 Contextual Perspective

This study targeted secondary school teachers in Greater Arua, encompassing both Arua City and Arua District in Uganda, with the aim of examining the relationship between instructional supervision and teacher competence. Teacher competence is influenced by the quality of initial teacher training, ongoing in-service training, school leadership and access to teaching and learning resources (Apriliyanti, 2020). Despite considerable investment in and prioritisation of teaching in secondary schools, teacher performance remains poor (Wilke et al., 2022). Factors such as the quality of teaching, school support, and student ability all play a role, but teaching quality seems to be the most significant issue (Rukundo & Bashaija, 2022). Poro et al. (2018) report that teachers exhibit inadequate competence in pedagogical and professional competence. Additionally, a lack of knowledge in curriculum interpretation by teachers further hampers effective instruction (Atuhurra & Kaffenberger, 2022). Linh and Kasule (2022) further highlighted that secondary school teachers in Uganda participated only minimally in professional learning communities, underscoring the pressing need for more consistent and comprehensive professional development programs.

The current debate surrounding the rollout of the secondary school competence-based curriculum focuses on whether teachers possess sufficient capacity and pedagogical adaptability to implement the curriculum. The implementation of the Competence-Based Curriculum (CBC) requires teachers to possess the necessary 21st-century competencies, including digital literacy and ICT competence, critical thinking and problem-solving, as well as creativity and innovation. Teachers are also expected to exhibit effective

communication skills, collaboration, teamwork, and adaptability and flexibility (Mariscal et al., 2023). However, concerns voiced by education stakeholders are that many teachers are still teaching the CBC like the old examination-oriented content, ignoring its core goals of nurturing critical thinking, digital literacy and creativity. Reports indicate that most teachers in Uganda lack adequate ICT skills due to insufficient training, which significantly impacts the use of ICT in classrooms (Mukhula et al., 2021). This issue is compounded by limited access to technological tools and time constraints, which negatively affect lesson planning, delivery, and assessment. This suggests that the implementation of ICT in Uganda is still in its early stages, with teachers yet to internalise and integrate ICT into their teaching.

Additionally, recent research on teacher autonomy in Uganda shows that while autonomy can motivate innovation in pedagogy, most teachers have yet to fully embrace the Active Teaching and Learning (ATL) strategies, the CBC requires (Kagoire et al., 2024). Similarly, a study on the role of instructional supervision in shaping Uganda's competence-based curriculum revealed that demonstrates low competence in classroom management, adoption of ATL methodologies, use of formative assessment methods and low attitudes towards the implementation of the CBC (Ssebunya et al., 2023). The authors highlight that effective instructional supervision is indispensable for implementing the CBC successfully across the national education system. The implication is that policy frameworks should emphasise instructional supervision and teacher competence as foundational to delivering equitable, quality education services throughout the country.

In a bid to improve teacher competence in Uganda secondary schools, the Government of Uganda (GoU) has made strides through refresher training such as SESEMAT. Komakech and Osuu, (2014) emphasized the critical role of effective teaching and learning practices in science and mathematics within Ugandan secondary schools. In the Greater Arua, northwest of Uganda, teachers from secondary schools attended SESEMAT training and other workshops and seminars organised by Belgium Technical Corporation (BTC) under the ENABEL program to strengthen teachers' pedagogical knowledge and skills. Similarly, recognising the need for ICT training, the Ministry of Education and Sports, in partnership with Airtel and UNICEF, organised an ICT training boot camp for selected teachers from secondary schools in selected districts of West Nile (Kazibwe, 2024). This was meant to enhance their skills in the application of ICT tools, ICT teaching methodologies and creating online teaching materials.

Nevertheless, for the past twenty years, there have been persistent concerns about the quality of teaching in both public and private secondary schools in Greater Arua. The large influx of refugees from South Sudan and the Democratic Republic of Congo has further intensified pressure on the education system, highlighting the urgent need for effective instructional leadership and highly competent teachers to sustain educational quality. Additionally, in Arua's secondary schools, many refugee children come from poor families, which directly affects their access to and completion of their education (Bradshaw & Gaestel, 2023). Greater Arua, just like much of West Nile, emerged from periods of political and social instability. Geographical remoteness and logistical challenges, such as a poor transport network, hinder

regular inspection of secondary schools in Greater Arua. This environment enables exploration of how school leaders enforce internal supervision in order to cope with limited external inspection.

The presence of newly qualified teachers, untrained graduate teachers, and temporary staff in some schools provides a critical context for examining the influence of instructional supervision on teacher competence. Such schools often face unique challenges, as many of these teachers demonstrate limited leadership abilities, inadequate integration of technology in their instructional practices, and insufficient use of appropriate student assessment strategies. These gaps hinder the development of learner-centered teaching approaches and compromise the overall quality of education delivery. As a result, the schools become ideal sites for understanding how effective instructional supervision could strengthen teachers' professional growth and enhance their instructional competence (Angundaru et al., 2016; Komakech & Osuu, 2014; Lating, 2009; Malunda, 2018).

Evidence from studies conducted in Greater Arua further illustrates these challenges. Reports reveal that the majority of secondary school teachers in this region fail to prepare comprehensive lesson plans, a practice that negatively affects the structure and delivery of their lessons. In addition, many teachers exhibit weak classroom management skills, which limits their ability to create conducive learning environments. Assessment of learners is also inadequately carried out, with teachers neglecting regular testing and evaluation practices that are essential for tracking learner progress and identifying gaps in achievement. Furthermore, there is minimal use of modern technology in classrooms, with teachers rarely employing digital

tools and resources to support teaching and learning. These findings suggest persistent weaknesses in teacher competence that call for closer examination of the role of instructional supervision in addressing such gaps (Angundaru et al., 2016; Odama, 2019; Okunia et al., 2019; Namae, 2020). There are concerns among education stakeholders that the low level of competence among teachers could be contributing to poor student academic performance in secondary schools in Greater Arua (Angundaru et al., 2016).

Against this background, education stakeholders have continually expressed worry and dissatisfaction regarding the levels of teachers' competence in secondary schools in Greater Arua, Uganda. Therefore, this study investigated the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

1.2 Statement of the problem

Teacher competence is essential for effective teaching, leading to high student learning outcomes (Wahdini & Saleh, 2020). This indicates that a teacher must have both technical and social skills to perform their professional duties effectively and efficiently (Poro et al., 2018). Despite efforts by the Ministry of Education and Sports through policies such as the Teacher Incentive Framework (MOES, 2019) and Continuous Professional Development (CPD) programs, reports from Uganda National Examinations Board (UNEB) show that many secondary schools continue to register low pass rates (UNEB, 2019). Local Education Office has further highlighted that supervision in these schools is often irregular, inadequately funded and sometimes lacks focus on pedagogical improvement (Drateru, 2024). There have been ongoing complaints about teachers' ability to perform at an

acceptable level in both public and private secondary schools in Greater Arua. This may be due to teachers having weak leadership skills, limited use of technology, and poor student assessment (Angundaru et al., 2016; Lating, 2009; Malunda, 2018).

Moreover, a significant number of teachers in Arua secondary schools have limited access to professional development opportunities, which contributes to persistent gaps in content mastery, lesson planning, classroom management and learner assessment. According to the study by Okiror et al. (2017), 63% of the teachers in West Nile felt unsupported in improving their teaching skills, citing ineffective feedback from supervisors and a lack of follow-up mechanisms as major challenges. Existing research demonstrates that many secondary school teachers in Greater Arua lack adequate mastery of subject content as well as practical pedagogical skills necessary for effective instruction (Odama, 2019; Okunia et al., 2019). This deficiency is further compounded by the fact that most teachers in the area rarely integrate modern technological tools into their teaching, often fail to cover the syllabus within the required timeframe, and exhibit weaknesses in lesson preparation and delivery (Lating, 2009; Angundaru et al., 2016). Such limitations undermine not only the quality of classroom teaching but also learners' overall academic performance.

Further evidence from Malunda et al. (2016) indicates that only about 33.9% of teachers observed made use of varied instructional methods. The majority of teachers in West Nile secondary schools continue to avoid learner-centered pedagogical approaches, instead relying on traditional, teacher-dominated practices that limit active learner engagement. These

patterns reflect low levels of teacher competence, which persist despite the government's investment in capacity-building interventions such as school-based mentorship programs and instructional supervision (Wamala & Seruwagi, 2012). This situation raises a critical concern: could it be that the instructional supervision provided in secondary schools across Greater Arua is not sufficiently effective in enhancing teacher competence? Addressing this gap is vital, as the effectiveness of supervision directly influences the professional growth of teachers and the quality of education delivered to learners. If this issue remains unaddressed, it could result in learners with low self-efficacy, poor educational attainment, and wasted national resources on education. The ongoing challenge of low teacher competence motivated the researcher to undertake this study to examine the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

1.3 Purpose of the Study

This study investigated the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

1.4 Research objectives

The study was designed to:

1. Assess the extent to which the various forms of instructional supervision are practiced in secondary schools within Greater Arua, Uganda.
2. Determine the level of teacher competence in secondary schools in Greater Arua, Uganda.
3. Analyze the relationship between directive supervision and teacher competence in secondary schools in Greater Arua, Uganda.

4. Examine the relationship between collaborative supervision and teacher competence in secondary schools in Greater Arua, Uganda.
5. Investigate the relationship between non-directive supervision and teacher competence in secondary schools in Greater Arua, Uganda.

2.5 Research Questions

The study was guided by the following research questions:

- 1 To what extent are the different dimensions of instructional supervision implemented in secondary schools in Greater Arua, Uganda?
- 2 What is the current level of teacher competence in secondary schools in Greater Arua, Uganda?

2.6 Research Hypotheses

The study tested the following null hypotheses:

H01: There is no statistically significant positive relationship between directive supervision and teacher competence in secondary schools in Greater Arua, Uganda.

H02: There is no statistically significant positive relationship between collaborative supervision and teacher competence in secondary schools in Greater Arua, Uganda.

H03: There is no statistically significant positive relationship between non-directive supervision and teacher competence in secondary schools in Greater Arua, Uganda.

1.7 Significance of the Study

This study holds significance in advancing foundational knowledge about the relationship between instructional supervision and teacher competence in secondary schools. Grounded in the principles of basic research, the study seeks to contribute to theoretical understanding and conceptual clarity in the domains of instructional leadership, teacher development, and educational quality. Primarily, the study aims to generate empirically grounded insights into how different supervisory approaches correlate with varying levels of teacher competence. This deepens understanding of the different ways through which supervision influences instructional actions and professional growth, thereby supporting the advancement of theory related to educational management and teacher performance.

Additionally, the study seeks to expand the existing body of knowledge by examining the context of secondary schools in Greater Arua, an area underexplored in the literature. By highlighting patterns and relationships specific to this setting, the research provides a reference point for comparative studies in other districts, regions, or educational systems.

While the study does not pursue immediate practical application, its findings may offer conceptual frameworks that inform the alignment of supervisory strategies with teacher competence levels. Such frameworks may later be applied by school-based administrators, education policymakers, and curriculum designers. In particular, the research may lay the foundation for developing a national competence profile for secondary school teachers in Uganda. This is a tool that could help define the knowledge, skills, attitudes, and values essential for effective teaching practice.

Moreover, the findings may inspire further academic inquiry into instructional supervision by encouraging scholars to explore additional variables, contexts, and methodological approaches. This aligns with the basic research goal of generating new questions and directions for study, thus contributing to a more comprehensive understanding of how professional support systems influence educational outcomes.

1.8 Justification of the Study

The ability of teachers to perform effectively and consistently in secondary schools remains a critical factor in determining the quality of education in Uganda. In the context of Greater Arua, which encompasses both urban and rural secondary schools, there is growing concern among education stakeholders regarding the declining levels of teacher competence. Observations and reports from district education offices, school administrators, and education NGOs suggest that many teachers in this region struggle with essential instructional practices. These include inadequate lesson planning, poor classroom management, ineffective learner assessment, and minimal integration of digital tools into pedagogy. Such challenges not only compromise students' academic performance but also contribute to systemic inefficiencies, resulting in wasted instructional time and underutilization of educational resources. The situation calls for an urgent investigation into the factors influencing teacher competence, among which instructional supervision plays a pivotal role.

Instructional supervision is designed to provide continuous professional support, feedback, and development for teachers. However, its implementation across secondary schools in Greater Arua appears inconsistent

and often lacks a strategic focus on improving teacher competence. While national policy frameworks such as Uganda's Education Sector Strategic Plan emphasise teacher support and supervision, little empirical research has been done to examine how these supervisory practices relate to actual teacher performance in this specific regional context. Therefore, this study is justified based on addressing a critical knowledge gap: understanding the relationship between instructional supervision and teacher competence in Greater Arua's secondary schools. By investigating this link, the study seeks to generate evidence that can inform school leadership practices, support data-driven educational planning, and contribute to the development of more effective supervision models tailored to the unique challenges faced by teachers in this region. Moreover, the findings from this research are expected to provide a theoretical and empirical foundation for future policy interventions, professional development programs, and academic inquiries, thus ultimately supporting efforts to improve teaching quality and learner outcomes in Uganda's secondary education sector.

1.9 Scope of the Study

1.9.1 Geographical Scope

The geographical scope of the study included private and government secondary schools in Greater Arua. Greater Arua includes Arua City and the Arua district. Arua city was carved out of Arua district in 2020. Greater Arua is found in the northwestern quadrant of Uganda, just north of the equator and west of the River Nile. The approximate grid reference for the centre of Arua City is Latitude: 3.0200° N and Longitude: 30.9100° E. Arua district and Arua City are geographically bounded. They border the Maracha and

Terego districts from the north. Greater Arua borders Madi Okolo to the east, Zombo to the southeast and the Democratic Republic of Congo (Aru and Ituri provinces) to the West. The study focused on Greater Arua because of the continual concerns of several stakeholders that how teachers instruct in secondary schools does not meet the Ministry of Education and Sports' standards. According to reports, the majority of teachers exhibited inadequate teacher competence in leadership, assessment and integration of technology (Malunda et al., 2016; Odama, 2019; UNEB, 2019).

1.9.2 Content Scope

Through this study, the relationship between instructional supervision and teacher competence was investigated in secondary schools in Greater Arua, Uganda. Instructional supervision was examined across three major approaches: directive supervision, which focuses on close monitoring, evaluation, and correction of teachers; collaborative supervision, which encourages joint planning, shared decision-making, and professional dialogue; and non-directive supervision, which promotes self-reflection and autonomy in improving instructional practices. Teacher competence was explored through four key domains: leadership competence, which reflects teachers' ability to inspire and manage learners effectively; professional learning competence, which emphasizes continuous skill development and adaptation to new demands; assessment competence, which entails the ability to measure learner progress fairly and consistently; and technological competence, which involves integrating digital tools to enhance teaching and learning.

Linking instructional supervision to teacher competence is particularly critical in Uganda's current education landscape, where the successful

implementation of the Competency-Based Curriculum (CBC) relies heavily on competent and innovative teachers. Despite ongoing reforms, many teachers continue to struggle with learner-centered pedagogy, effective classroom assessment, and the integration of technology. These skills are central to the Competency-Based Curriculum (CBC). In Greater Arua, these challenges are compounded by issues such as untrained or underprepared teachers, limited instructional resources, and weak professional support structures. Investigating how supervision practices influence teacher competence therefore provides valuable insights for strengthening teacher performance, improving curriculum delivery, and ensuring that secondary schools align with national education goals. The findings are expected to inform both school-level practices and broader education policies aimed at raising the quality of teaching and learning outcomes under Uganda's CBC reforms.

1.9.3 Time Scope

This investigation was undertaken between 2017 and 2024, a period in which secondary education in Greater Arua was marked by persistent concerns over teacher competence. Several studies reported that many teachers in the region exhibited limited leadership capacity, weak assessment practices, and low levels of technological integration in classroom instruction (Odama, 2019; Angundaru et al., 2016). These challenges, however, are not unique to Greater Arua but reflect broader systemic issues within Uganda's secondary education sector. Nationally, schools have struggled with inadequate teacher preparation, insufficient professional development opportunities, and limited access to teaching and learning resources.

Furthermore, the introduction of the Competency-Based Curriculum (CBC) has further emphasized the need for teachers who can design learner-centered lessons, apply modern pedagogical methods, conduct effective assessments, and integrate technology into their practice. Yet, evidence suggests that many teachers remain ill-equipped to meet these new demands, raising concerns about the overall quality of instruction and learner achievement. Against this backdrop, investigating the relationship between instructional supervision and teacher competence becomes crucial for ensuring that educational reforms in Uganda achieve their intended outcomes.

1.10 Conceptual Framework

INSTRUCTIONAL SUPERVISION

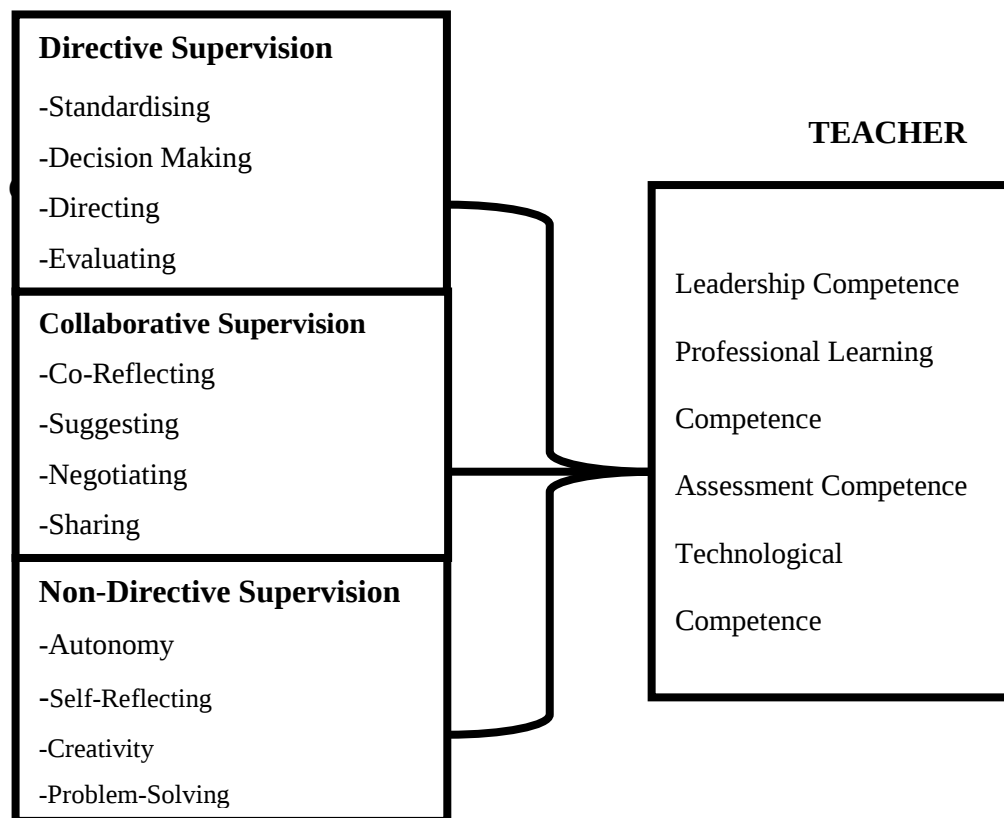


Figure 1.1

Conceptual Framework indicating the relationships between instructional supervision and teacher competence

Sources: Adapted from (Glickman et al., 2010; Caena, 2014)

The conceptual framework illustrates how instructional supervision relates to the enhancement of teacher competence. It posits that when directive, collaborative, and non-directive supervisory approaches are effectively applied, they contribute to the development of teacher leadership, professional learning, assessment practices, and technological competence. Drawing on Glickman et al. (2010), the framework emphasizes that teachers require differentiated forms of support, ranging from directive guidance, collaborative engagement, to opportunities for autonomous reflection, in order to strengthen their instructional practices and ultimately improve the teaching and learning process.. Thus, directive supervision is meant to support novice teachers, as well as expert teachers who are experiencing challenges in the classroom. In contrast, collaborative supervision encourages cooperative and collegial learning by having the teacher and supervisor plan and work together as equals. In non-directive supervision, it is expected that a teacher would acquire knowledge and skills when given significant instructional decision-making authority. This is accomplished when the supervisor actively listens to the teacher, clarifies what the instructor has said, and encourages the teacher to talk more and engage in reflective practice.

Instructional leadership, as articulated by Hallinger and Murphy (1985), provides a useful theoretical foundation for examining the relationship between instructional supervision and teacher competence. The theory underscores the pivotal role of instructional leaders in guiding, mentoring, and supporting teachers to improve the quality of classroom instruction. According to this perspective, instructional leaders enhance teacher competence by formulating and communicating a clear school

mission, effectively managing curriculum and instruction, and fostering a supportive and enabling school environment.

Within this framework, teacher competence can be strengthened through developmental supervision, which is grounded in principles of teacher support, mutual trust, and accountability. Such competence manifests in various domains, including a teacher's ability to exercise leadership during the teaching and learning process, engage in continuous professional learning with peers, implement effective assessment practices, and integrate technology into instruction. Nonetheless, it is important to acknowledge that certain factors outside the scope of this study such as teachers' age, teaching experience, academic qualifications, and the structural context of schools may also influence the extent to which instructional supervision contributes to competence enhancement.

1.11 Operational Definition of Key Terms

Assessment competence: This is the ability of the teacher to design, administer assessment tasks and report student learning outcomes.

Collaborative supervision: This involves negotiation, co-reflection and shared responsibility between the supervisor and the teacher.

Direct assistance: This is when the supervisor uses direct control, standardisation and evaluation of the assigned tasks.

Directive Informational supervision: This is when the supervisor listens, clarifies and suggests alternatives for the teacher to choose from, so as to mitigate instructional challenges.

Instructional Supervision: This is the school-based professional support offered by educational leaders or administrators with the aim of improving

teachers' knowledge, skills, and instructional practices. Its purpose is to enable teachers to carry out their teaching responsibilities more effectively and efficiently, thereby enhancing the overall quality of learning outcomes.

Leadership competence: Refers to the ability of the teacher to organise the classroom, gain class control and motivate learners.

Non-directive supervision: This is when the teacher is given more control by encouraging engagement in self-reflection and problem-solving.

Professional learning: This is the ability of the teacher to acquire or enhance his/her knowledge, skills and dispositions through reflection and working with colleagues.

Teacher competence: This is the ability of the teacher to apply the different knowledge, skills, attitudes and motivation to achieve exemplary performance.

Technological competence refers to using both traditional and modern resources to produce and transfer knowledge.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter presents both the theoretical framework and a review of related literature. The literature review is structured around the key objectives of the study, beginning with an examination of how the different dimensions of instructional supervision are applied in secondary schools, followed by an exploration of the current status of teacher competence. It further analyzes existing research on the relationship between directive supervision and teacher competence, collaborative supervision and teacher competence, as well as non-directive supervision and teacher competence. Finally, the chapter concludes with a synthesis of the reviewed literature, highlighting the gaps that this study sought to address.

2.1 Theoretical Review

The study was anchored in the Instructional Leadership Theory developed by Hallinger and Murphy (1985). This theory emphasizes that school leaders are central to improving teaching quality and student learning outcomes through active engagement in curriculum planning, classroom supervision, teacher evaluation, and professional development (Hallinger, 2020). Instructional leadership practices are organized into three primary domains: establishing and communicating the school's mission, managing the instructional program, and fostering a positive and supportive school learning environment (Hallinger, 2021).

Instructional leadership can be effectively applied in a study to investigate the relationship between instructional supervision and teacher

competence by providing a structured approach to examining how school leaders guide and support teachers. It enables the identification of effective supervision practices. The study specifically postulates that instructional supervisors manage instructional programs through classroom observation and feedback sessions, which improves teachers' lesson planning, delivery and assessment skills. Similarly, by promoting a learning climate through reflective practice and mentorship, instructional leaders enhance teachers' morale and self-efficacy. Finally, by defining school mission through aligning supervision with academic goals empowers teachers to set clear teaching objectives and shared expectations (Kilag & Sasan, 2023; Nguyen et al., 2020).

Goal setting provides teachers with clear expectations and targets, helping them align their instructional planning and classroom activities with the school's educational objectives. Classroom supervision allows principals to observe teaching practices directly, identify areas needing improvement, and provide timely support, ensuring that teachers adopt effective instructional strategies. Constructive feedback offers teachers specific guidance on their strengths and weaknesses, enabling them to refine lesson delivery, improve classroom management, and enhance student assessment practices. Finally, professional development initiatives, including workshops, peer mentoring, and training programs, provide teachers with updated knowledge, innovative teaching strategies, and technological competencies, thereby promoting ongoing growth and adaptability in their instructional practices. Collectively, these practices create a supportive school environment that encourages ongoing improvement, accountability, and the development of leadership,

assessment, professional learning, and technological competencies among teachers.

Instructional leadership in its various interpersonal styles is effective in developing teacher competence (Herawati & Tjahjono, 2020). Instructional supervisors used directive supervision in managing instructional programmes by offering direct guidance to teachers on how to plan and teach lessons. Directive supervision is a top-down approach where the supervisor identifies the problem, sets goals, determines the methods and evaluates outcomes (Hoque, et al., 2020). Instructional leaders apply directive supervision to teachers who are new or underperforming, to ensure that minimum standards are met. On the other hand, supervisors use a collaborative approach to promote collaborative learning, whereby teachers and supervisors work together to evaluate lessons and improve practices. In a collaborative approach, supervisor and teacher work together to identify needs, set goals and assess learning outcomes (Castro-Rodríguez, 2022). Lastly, instructional supervisors employ non-directive supervision to enhance teacher autonomy by encouraging teachers to reflect on their teaching through open-ended feedback sessions and mentorship. Non-directive supervision suits well-trained, motivated teachers but may need a support structure to be effective (Ghamrawi et al., 2019).

Recent studies have reaffirmed that effective instructional supervision underpinned by instructional leadership theory contributes to improving teacher competence (Mutunga et al., 2023), in their study of Kenyan secondary schools, found that regular formative supervision led to improvement in instructional planning, classroom management, and student

engagement. The study highlighted that supervision grounded in collaborative and developmental approaches, which are the core tenets of instructional leadership, had a positive influence on teacher competence. Similarly, Abebe and Tesfaye (2021) in Ethiopia reported that teachers in schools with structured supervisory practices performed well in terms of pedagogical skills, assessment strategies and content delivery, which are key dimensions of teacher competence. Furthermore, a study by (Wangari et al., 2023) examined how instructional leadership informs supervision practices in secondary schools in East Africa. The study revealed that principals who engaged in classroom walkthroughs, peer coaching programmes and professional learning communities, which are key attributes of instructional leadership, boosted teacher motivation and teaching quality. These leaders provided timely feedback and facilitated reflective practice. The above studies, underpinned by instructional leadership theory, confirm the positive relationship between instructional supervision and the development of teacher competence.

The effectiveness of instructional supervision hinges on the head teacher's understanding and application of instructional leadership principles. Ali and Ahmad (2021) found that in Malaysian secondary schools, principals who adopted hands-on approaches to supervision, including lesson observation, mentoring and modelling, fostered a high level of teacher efficacy and student academic achievement. A comparative study by Mensah and Osei (2022) in Ghanaian and Nigerian secondary schools found that instructional supervision, when embedded in school management, positively influences teacher performance metrics. Principals who prioritised curriculum

alignment, goal setting and instructional monitoring enabled teachers to become more competent and confident in their roles. Additionally, instructional supervision that is tightly coupled with professional development is likely to result in sustained improvements in teacher competence. Mutua and Kiilu (2023) argue that instructional leaders should act as facilitators of learning for their staff by organising Continuous Professional Development (CPD) sessions based on supervision data. The assertion aligns with Bush's (2020) model, which sees instructional leadership as a means to identify professional needs and strategically address them through targeted professional development opportunities.

Instructional leadership practices that encourage teacher support have been found to enhance teachers' professional development. A large-scale study across secondary schools in Uganda found that both classroom observation and portfolio supervision significantly improved teacher pedagogical practices (Malunda et al., 2016). Similarly, a study by Angucia (2015) found that teachers in Arua Municipality perceived that instructional leaders fostered teacher competence through supervision. Study participants acknowledged that instructional supervision practice of lesson observation enhanced their teaching preparation, assessment practices and decision-making skills. The study on the roles of internal instructional supervision in enhancing teacher effectiveness, in Pader district, revealed that instructional leaders enhanced teacher competence through engaging in lesson preparation, artefact review, and collegial debriefs (Otto, 2018).

Despite the recognised benefits of instructional leadership theory, some studies reveal persistent challenges. Chirwa and Mhlanga (2021)

identified some inconsistencies in supervision frequency and quality often attributed to leadership overload and lack of training in supervision techniques. Kimathi et al. (2024) pointed out that in resource-constrained environments, principals struggle to effectively perform their supervisory roles due to administrative overload and limited professional development in leadership skills. In Greater Arua and other similar contexts in Uganda, resource constraints, local culture, and administrative capacity can strongly influence how supervision shapes competence. Hallinger (2003) cautions that the roles and effectiveness of leadership depend heavily on contextual factors such as school size, community culture, and ignoring this can lead to misleading conclusions. Overemphasis on formal leadership may lead to misleading conclusions on the effectiveness of instructional leadership. The theory often centres on school heads, potentially overlooking the role of peer collaboration and teacher leadership, which are crucial in competence development. In addition, instructional leadership theory assumes a direct relationship between leadership and outcomes. However, the relationship can be mediated by other factors such as motivation, infrastructure and policy support.

In conclusion, the theoretical review has underscored the role Instructional Leadership theory plays in explaining how instructional supervision relates with teacher competence. The theory provides clearly defined roles for school leaders in guiding instructional improvement, which aligns with how instructional supervisors influence lesson planning, teaching, use of technology and assessment (Ismail et al., 2018). Furthermore, principals who implement instructional leadership practices including goal

setting, classroom supervision, providing constructive feedback, and facilitating professional development, foster a culture that promotes continuous improvement in teacher competence. On the other hand, instructional leadership theory allows flexibility in supervision styles. Previous studies have demonstrated that adaptive leadership that switches between directive, collaborative styles is effective (Edgar et al., 2022; Ghamrawi et al., 2019; Ibrahim, 2018). This is consistent with the modern interpretation of instructional leadership theory.

2.2 Application of the dimensions of instructional supervision in secondary schools in Greater Arua

The purpose of the literature review was to assess how the different dimensions of instructional supervision are applied in secondary schools in Greater Arua, Uganda. The review involved searching for relevant articles from Google Scholar, Google Books and reports. The review is guided by Glickman's (2010) developmental supervision model. School administrators can choose directive, collaborative, or non-directive supervision approaches depending on each teacher's level of professional development. Instructional supervision serves as a systematic process in which school leaders engage with teachers to improve the overall quality of teaching and learning in the school (Wanzare, 2012). Hoque et al. (2020) categorize teachers into four groups according to their approach to supervision: the first group relies heavily on supervisors to provide solutions to instructional challenges; the second prefers to collaborate with supervisors to address these challenges; the third views supervisors as resources to consult as needed; and the fourth

seeks autonomy in managing instructional issues and pursuing professional development.

Research suggests that supervisory approaches should be tailored to the context, situational demands, and individual characteristics of teachers, as employee performance is closely linked to motivation (Brownless, 2020). Similarly, Glickman et al. (2010) emphasize that developmental supervision requires supervisors to assess a teacher's current conceptual level and provide feedback and support that facilitates progression to the next professional stage. Consequently, developmental supervision is a multifaceted approach aimed at fostering teacher growth and professional development. It is characterised by adaptability to individual teacher needs and professional stages, with the ultimate goal of enhancing instructional competence and effectiveness in the classroom (Sonia, 2022). This approach contrasts with traditional models of supervision that focus on control and compliance, instead fostering a continuous and supportive process that encourages teacher autonomy and development (Ngwenya, 2020).

However, existing literature indicates that school authorities tend to rely more heavily on directive supervision than on collaborative or non-directive approaches (Ampofo et al., 2019; Ibrahim, 2018; Shulman et al., 2008). In a directive approach, teachers are given specific instructions on what is expected in their lesson planning, classroom management and assessment of learning. Frequent monitoring and direct feedback, which are elements of directive supervision, lead to teaching effectiveness and professional development. This perspective aligns with Glickman et al. (2010), who argue that effective developmental supervision involves

assessing teachers' current conceptual levels and offering tailored feedback and guidance to promote their professional growth.

Similarly, a study on academic supervision in elementary schools found that supervisors predominantly employed directive supervision, using collaborative and non-directive approaches far less frequently (Karnati (2019). This implies that supervisors believed that directive supervision enables teachers to follow and adhere to curriculum goals. Thus, ensuring that the professional responsibilities are being met consistently. Kanyesigye et al (2024) in their study in Ibanda municipality, Uganda, found that supervisors applied directive supervision to support teachers in their professional growth. Similarly, a cross-sectional survey of 14 secondary schools in Mukono district, Uganda, found that directive supervision, which was focused on observations and corrections, was commonly used (Nabwire, 2014). This is in line with the principles of developmental supervision, suggesting that supervision should be tailored to the individual needs and professional growth stages of teachers (Basantes-Andrade et al., 2022).

A study by Tayebwa (2022) revealed that collaborative approaches such as mentorship, collaborative teaching and professional growth were being implemented in secondary schools in Rukungiri, Uganda. Mentoring as a form of collaborative supervision has been found to help build teachers' confidence, improve their teaching effectiveness, and strengthen classroom practices in government-aided secondary schools in Uganda (Okumu et al., 2021). This aligns with the principles of developmental supervision, which aims to support teacher growth and improvement. Karnati (2019) found that

teachers perceived the use of collaborative supervisory approaches as a positive strategy for enhancing their professional competence.

Similarly, Wiyono and Rasyad (2021) reported that most supervisors in Indonesia employed collaborative supervision because it is grounded in mutual respect, which in turn strengthens team cohesion and boosts staff morale. A study conducted by Christopher et al. (2024) in Ilala municipality, Tanzania, revealed a successful application of collaborative supervision. The prevalent collaborative practices employed to enhance teachers' professional knowledge and skills included coaching, teaming and mentoring. Wakasa, (2023) conducted a study in Kakamega County and found that collaborative supervision was widely applied. This implies that when supervisees are actively involved in decision-making and problem-solving, they learn to critically assess situations, rather than just follow orders.

Research in Rukungiri district, Uganda, also found that supervisors applied collaborative supervision in secondary schools with positive results. Teyebwa et al. (2021) indicated that school-based supervisors applied collaborative supervision practices such as mentorship and collaborative teaching. These forms of supervision and teacher support were positively associated with teacher effectiveness. This suggests that collaborative supervision has a high potential to enhance teacher competence if appropriately applied to teachers. Although previous studies highlight the benefits of collaborative supervision, their findings may not fully apply to Greater Arua due to contextual differences. Factors such as the level of teacher training, availability of teaching and learning resources, and cultural norms within schools can significantly influence how collaborative

supervision is implemented and its effectiveness. For instance, teachers with limited professional preparation may require more guidance and structured support, while schools facing resource constraints might struggle to engage in joint planning or peer mentoring activities. Additionally, local cultural attitudes toward hierarchy and authority could affect teachers' willingness to participate openly in collaborative decision-making. By focusing on secondary schools in Greater Arua, this study aimed to provide context-specific evidence on how collaborative supervision operates in practice and how it impacts teacher competence in this particular setting.

Non-directive supervision plays a critical role in fostering teacher autonomy and reflective practice, which are essential for professional growth across multiple competence domains. By reducing hierarchical pressures and encouraging teachers to take initiative, this approach enables educators to make instructional decisions independently, enhancing their leadership competence within the classroom. It also promotes professional learning competence, as teachers engage in self-directed reflection, collaboration with colleagues, and continuous skill development without relying solely on supervisor directives. In terms of assessment competence, non-directive supervision allows teachers to experiment with varied evaluation methods, reflect on their effectiveness, and adjust strategies to better meet learner needs. Similarly, technological competence is strengthened as teachers are empowered to explore and integrate digital tools creatively, rather than following prescriptive instructions. Overall, non-directive supervision creates an enabling environment where teachers can develop critical skills, build

confidence in their professional judgments, and adopt learner-centered teaching practices, ultimately enhancing overall instructional effectiveness.

Regarding the use of non-directive supervision, Strieker et al. (2016) reported that more than half of the documented cases employed a non-directive approach, compared to fewer instances of collaborative or directive supervision. Hoque et al. (2020) similarly observed that supervisors often adopted non-directive strategies when working with teachers. Likewise, Karnati (2019) established that principals applied non-directive supervision on teachers who demonstrated high conceptual understanding and autonomy during the instructional process. This approach minimises hierarchical power dynamics, facilitating the open exchange of ideas and concerns, and thereby fostering trust, mutual respect, and professional collaboration between supervisors and teachers.

Furthermore, in Uganda, Okia et al (2021) conducted a study on the status of support supervision in primary schools in the Teso sub-region. The findings revealed the application of non-directive supervision to enhance teacher performance. In addition, the study revealed that the application of mentoring and reflective practice was effective in enhancing teacher performance. Similarly, Ntege et al (2020) in their study on the effect of directive and non-directive inspection in primary schools, found out that the non-directive approach was being applied successfully.

Despite the clear advantages associated with directive, collaborative, and non-directive supervision, their implementation in schools is often constrained by several factors. Limited training for school supervisors can result in a lack of knowledge or confidence in applying varied supervisory

approaches effectively. Resource constraints, including insufficient teaching materials, inadequate time for supervision, and lack of technological infrastructure, further hinder the consistent application of these practices. Additionally, contextual challenges such as large class sizes, high teacher-student ratios, and entrenched hierarchical or cultural norms can reduce opportunities for meaningful collaboration and reflective practice. These limitations directly impact teacher competence, as teachers may receive insufficient guidance, feedback, or professional development opportunities to enhance their leadership, professional learning, assessment, and technological skills. Consequently, the potential of instructional supervision to improve teaching quality and learning outcomes is not fully realized, highlighting the need for context-sensitive strategies to strengthen its application.

In Uganda, school inspection, which could be considered a form of supervision, was not found to significantly influence lesson planning in secondary schools in Uganda (Bagaya & Wafula, 2020). This indicates a potential gap in the effective application of supervisory practices, which could have affected the quality of teaching in Ugandan schools (Rukundo & Bashaija, 2022). One reason for this is that inspections are often conducted as formal, compliance-driven exercises rather than as supportive, developmental processes. Teachers may focus on meeting procedural requirements rather than improving the quality and effectiveness of their lessons. Additionally, inspections may occur infrequently or without follow-up, limiting their potential to provide meaningful feedback or guidance for professional growth. This situation reflects broader challenges in teacher competence, as the lack of ongoing, targeted support hampers the development of critical

skills such as leadership in the classroom, reflective professional learning, effective assessment practices, and the integration of technology into teaching. Consequently, while inspections can identify deficiencies, they may do little to enhance the practical teaching capacities that underpin improved learner outcomes. This suggests a need for more effective developmental supervision to support teacher improvement in education.

Professional Learning Communities (PLC), which can be a vehicle for developmental supervision, were reported to have 'minimal' involvement of secondary school teachers in Uganda (Linh & Kasule, 2022). This indicates that there may be limited application of collaborative, growth-oriented supervisory practices in Ugandan secondary schools. PLCs provide a platform for teachers to collaborate, share best practices, and engage in continuous professional learning, which is essential for strengthening leadership, assessment, professional learning, and technological skills (de Nazaré et al., 2020). When participation in PLCs is limited, teachers have fewer opportunities to develop leadership competence through peer mentoring or leading instructional initiatives. Professional learning competence is also undermined because teachers are not consistently exposed to reflective discussions, innovative teaching approaches, or opportunities for skill enhancement.

Similarly, assessment competence may be constrained, as teachers miss the chance to discuss and refine evaluation strategies collaboratively. Finally, technological competence suffers when teachers are not engaged in collective exploration of digital tools and instructional technologies. Overall, the minimal involvement of teachers in PLCs restricts their capacity for

growth, reduces collaborative problem-solving, and limits the adoption of learner-centered practices, highlighting a critical gap in the implementation of developmental supervision in Ugandan secondary schools.

The limited and often ineffective nature of administrative and instructional supervision has significant implications for teacher competence and the adoption of learner-centered practices. When supervision is infrequent, evaluative, and rigid, as reported by Shulman et al (2008), teachers receive minimal constructive guidance to improve their instructional strategies, classroom management, and assessment practices. This scenario discourages reflective practice and reduces opportunities for professional growth, particularly in areas such as leadership, assessment, and technological integration. Hoque et al. (2020) emphasize that supervision should support teachers' development rather than simply evaluate performance; without this supportive approach, teachers are less likely to implement learner-centered methodologies that require creativity, adaptability, and continuous feedback.

In the Ugandan context, studies in districts such as Wakiso highlight similar challenges, including inadequate resources, inconsistent supervisory practices, and the use of questionable methods (Nzabonimpa, 2009; Wanzare, 2012). These limitations restrict teachers' capacity to enhance their professional competence and hinder the effective delivery of student-centered instruction, underscoring the need for more context-sensitive and developmental approaches to supervision, particularly in regions like Greater Arua where teacher support structures may be weak.

In conclusion, the instructional supervisory model that categorises supervisory approaches into directive, collaborative, and non-directive behaviours has influenced the development of various supervisory tools and measures (Ghamrawi et al., 2019; Muda et al., 2020). However, its application and importance are not uniformly acknowledged across different contexts, particularly in developing countries (Sonia, 2022). Moreover, the model has been adapted and extended to various fields, including health service psychology and school psychology, indicating its broad applicability beyond general education (Brownless et al., 2020). Consequently, when principals effectively plan, implement, and evaluate supervision, it contributes to improving teachers' overall competence and achieving better educational outcomes.

The above literature indicates various approaches to instructional supervision being implemented. However, very few studies presented findings on the context of Greater Arua, Uganda. Most studies are generalised across Africa or Western contexts. There is a scarcity of localised empirical research that fully considers the socio-cultural, economic and policy-specific realities of secondary schools in Greater Arua, Uganda. Thus, little is known about the application of instructional supervisory approaches in Greater Arua, Uganda. This gap in the literature was filled by conducting a mixed-method research in secondary schools in Greater Arua to assess how the different dimensions of instructional supervision are applied to teachers.

2.3 The status of Teacher competence in secondary schools in Greater Arua, Uganda

The purpose of the review was to explore the status of teacher competence in secondary schools in Greater Arua, Uganda. The review involved searching for relevant articles and books from Google Scholar, Google Books and reports. According to Oliva et al (2016), a teacher's competence is the set of knowledge, skills, motivation, values and beliefs necessary for the successful performance of professional activities. Roelofs and Sanders (2007) defines competence as the individual's capacity to achieve the intended performance. In most instances, a teacher's competence is determined by his or her academic aptitude, teaching experience, and classroom conduct (Nyakundi, 2020). This suggests that teachers must possess not just knowledge and abilities but also motivations, beliefs, and attitudes to achieve excellent performance.

Furthermore, teacher competence encompasses a multifaceted set of skills and knowledge required for effective teaching across various educational contexts. It includes pedagogical content knowledge, self-efficacy, enthusiasm, and the ability to foster a supportive classroom climate and manage classroom interactions effectively (Fauth et al., 2019). Additionally, teacher competence in the digital realm is increasingly important, as it enables the integration of technology into lesson plans to enhance problem-solving, communication, creativity, collaboration, and critical thinking skills (Elyna et al., 2021). Moreover, health science teacher competence is evolving to include leadership, evidence-based practice, ethical considerations, and continuous professional development, reflecting

changes in healthcare standards and organisational structures (Männistö et al., 2019).

From the above definitions, teacher competence has different domains. According to the Dutch Foundation for Professional Teaching Competence (SBL), the domains of teacher competence were interpersonal, pedagogic, subject matter, organisational, interacting with colleagues and environment, and self-reflection competence (Roelofs & Sanders, 2007). Afema (2016) categorised the competence of lecturers as professional, educational, personal, and social. According to Nyakundi (2020), teacher competence is assessed based on the following domains: field, research, curriculum, emotional, social, cultural, communication, and lifelong learning. On the other hand, Akinbode and Adekunle (2019) argue that teaching methods, teaching strategies and principles taught in courses, as well as teaching practice, contribute to teacher-trainee competence. This implies that there are several types of skills, such as professional, educational, technical, and social competence (Karnati, 2019; Kartini et al., 2020). Teacher competence encompasses a broad range of skills beyond just the ability to follow directives. These competencies include leadership, evidence-based practice, ethical, pedagogical, collaboration, internationalisation, and continuous professional development (Männistö et al., 2019). Pedagogical competence, in particular, is highlighted as a unique and essential skill for teachers, distinguishing their profession from others (Shelly et al., 2020). Additionally, intercultural communicative competence and leadership skills are also considered vital for teachers, especially in diverse student groups (Annenkova, 2021).

The competence of teachers in leadership and management is increasingly recognised as a pivotal factor in educational outcomes. Studies have shown that teacher leadership competence is crucial for achieving quality education, with a high level of this competence reported in Malaysian secondary schools (Kadri et al., 2021). Teacher leadership is also linked to school improvement and professional development, which in turn enhances student learning experiences (Abdallah, 2023). While intercultural communicative competence is a key characteristic of foreign language teachers, leadership skills are not often directly referenced as a component, despite their importance in diverse educational settings (Annenkova, 2021). Moreover, knowledge management was not found to mediate the relationship between transformational leadership and teaching innovation, suggesting that direct leadership skills may be more influential in this context (Supermane, 2019). In summary, leadership and management competence in teachers is integral to educational success. This competence is essential for teachers as they navigate the complexities of modern education and strive for school improvement and effective student learning outcomes (Madisa & Suariah, 2019). Therefore, the development of leadership skills should be considered a critical component of teacher education and professional development programs to foster a positive educational environment and enhance the quality of education.

The professional learning competence of a teacher encompasses a multifaceted set of knowledge, skills, and attitudes that are essential for effective teaching and for promoting positive student outcomes (Thoonen, et al, 2011). This competence includes the ability to engage in continuous self-

reflection, adopt innovative teaching strategies, collaborate with colleagues, and integrate new pedagogical knowledge into classroom practice. It also involves actively participating in professional development activities, adapting to curriculum reforms such as Uganda's Competency-Based Curriculum (CBC), and staying updated on emerging educational technologies. Teachers with strong professional learning competence are better equipped to respond to diverse learner needs, improve instructional quality, and contribute to a culture of continuous improvement within their schools.

The literature suggests that professional competence includes not only theoretical knowledge but also practical skills, pedagogical abilities, and important personal qualities (Armin & König, 2022). Moreover, competence is linked to teacher performance and student learning achievement, with educational facilities and infrastructure also playing a significant role (Taufan, 2022). This competence can be conceptualized across four key domains: leadership competence, which reflects a teacher's ability to guide, motivate, and manage learners effectively; professional learning competence, which involves continuous skill development, reflection, and collaboration with colleagues; assessment competence, encompassing the design and implementation of effective evaluation strategies; and technological competence, which pertains to integrating digital tools to enhance teaching and learning. Instructional supervision whether directive, collaborative, or non-directive, serves as a critical mechanism for enhancing these competencies. Through structured guidance, collaborative problem-solving, and autonomous support, supervision provides teachers with feedback,

resources, and professional development opportunities that strengthen their leadership, refine their assessment practices, promote reflective learning, and encourage innovative use of technology in the classroom. Consequently, effective supervision is instrumental in translating professional competence into improved teaching performance and learner outcomes.

Contradictions arise in the literature regarding the impact of teacher professional development on an increase in teacher competence and performance. While one study found no significant effect of professional development on performance, another identified a positive effect of professional development on student achievement through improved teacher competence (de Vries et al., 2022; Taufan, 2022). Additionally, the importance of intrinsic motivation in preservice teachers' professional learning and perceived competence is highlighted, and the role of teacher autonomy in enhancing professional competence is emphasised (Bahadur, 2023). Therefore, professional learning competence is a complex construct that is vital for teacher effectiveness and student success. It is influenced by a combination of individual teacher qualities, professional development, and external factors such as educational infrastructure (Kinser-Traut & Marx, 2022). However, Linh and Kasule (2022) in their comparative study found a moderate level of professional learning competence among the teachers in Vietnam compared to the Ugandan secondary teachers, which was low. They recommended government support in strengthening professional learning communities to enhance teacher competence. Additionally, the literature underscores the need for innovative professional development approaches

that cater for the evolving needs of teachers and the education system, particularly in the context of rapid technological and cultural changes.

The professional competence of a teacher is a critical variable in human resource theory, particularly in the field of education, where it directly influences teacher quality and the effectiveness of learning (Herawati & Tjahjono, 2020). Professional competence includes not only theoretical knowledge but also practical skills, abilities, and personal qualities that enable teachers to successfully self-realise in the educational process. It is considered a criterion for performance and efficiency in teaching, and its development is multifaceted, involving mastery of the material, pedagogical skills, and the ability to develop learning materials creatively (Pogolşa & Victoria, 2022; Pongkendek et al., 2021).

It is important to note that professional competence is not only about individual teacher abilities but also about the influence of external factors such as instructional leadership, self-efficacy, and social capital (Herawati & Tjahjono, 2020). Moreover, it has been shown to have a significant impact on teacher performance, both individually and in conjunction with pedagogical competence (Murkatik et al., 2020). The concept extends to various specialisations, including music education, economics, physical education, and the integration of digital competence. It can then be concluded that professional competence is a multifaceted construct that is vital for the efficacy of teachers and the success of the educational process. The development of professional competence is therefore crucial for teacher performance and the overall quality of education.

While some studies have found that professional competence directly influences teacher performance and student learning outcomes (Murkatik et al., 2020; Taufan, 2022), others have highlighted the importance of mediating factors such as self-efficacy, social capital, and intrinsic motivation (Herawati & Tjahjono, 2020; Tang et al., 2021). Additionally, the development of professional competence in specific domains, such as communicative competence for linguist-translators, requires targeted educational models and materials (Gorbunov & Gorbunova, 2019). The role of educational facilities and infrastructure has also been noted as significant in supporting the development of professional competence (Taufan, 2022).

On the other hand, it is essential to note that a teacher should also possess assessment competence to help them design different assessment tasks to improve student learning outcomes. Assessment competence of teachers encompasses a broad set of skills and knowledge that enable them to effectively evaluate student learning and adapt their teaching strategies accordingly. It is a multifaceted construct that includes technical skills in assessment, as well as a context-dependent understanding that varies across cultures (DeLuca et al., 2019). Additionally, it is linked to socio-emotional competence and self-efficacy, with higher levels of this competence correlating with a greater sense of self-efficacy in teachers (Carmen et al., 2022).

Importantly, while the overall dimensions of assessment competence may not be culture-dependent, specific approaches and purposes of assessment do vary between countries, as seen in the comparison between Canadian and German student teachers (DeLuca et al., 2019). Moreover, the

development of assessment competence can be influenced by the teacher's age, gender, and experience, with certain socio-demographic groups displaying higher levels (Carmen et al., 2022). Furthermore, the competence in physical education assessment is an example of a domain-specific assessment competence that requires a systematic approach to monitor the development of a student's abilities (Zemlyanskaya, 2020). From the above literature, it can be deduced that assessment competence is a critical component of teacher professionalism that is influenced by a variety of factors, including socio-emotional skills, self-efficacy, cultural context, and demographic characteristics.

However, the literature indicates low assessment competence among secondary teachers in Uganda. A study by Malunda et al. (2016) revealed that teachers rarely conducted formative assessment, an indication of a low level of assessment competence. Rukundo and Bashaija (2022) found that most secondary teachers in Uganda had generally low competence, a reason for poor performance in science subjects at national examinations. However, this study was conducted outside the context of Greater Arua. Additionally, data were mostly collected using interviews and documentary reviews. The current study investigated the status of assessment competence among teachers in greater Arua using a survey, interviews and classroom observation.

The technological competence of teachers is a critical aspect of modern education, as it enables the integration of digital tools and resources into the teaching process to enhance learning outcomes. Leoste et al. (2022) suggest that educational robots and Science, Technology, Engineering, Art,

and Math (STEAM) kits can significantly develop student-teacher digital competence, which includes technological skills. Orakova et al. (2024) findings indicate that primary school teachers in Kazakhstan possess moderate levels of digital literacy and technological competence, with gender and professional seniority influencing these competence. Similarly, Demeshkant (2020) reveals that PhD students, as future academic teachers, show varying levels of digital competence based on their field of study, with engineering students scoring highest in technological skills.

Furthermore, Huang et al. (2021) highlight a deficiency in teachers' ICT knowledge and a reluctance to apply it, suggesting a need for ongoing in-service training to improve digital competence. Atmojo et al. (2022) case study also reveals a varying range of digital literacy among teachers, from very low to high, with many falling into the lower categories. Accordingly, while there is evidence of initiatives to enhance teachers' technological competence, the actual levels of competence vary widely. This variation in teacher competence is shaped by factors such as discipline, gender, professional experience, and access to targeted training programs. Collectively, these studies highlight the critical importance of ongoing professional development in technological competence, enabling teachers to effectively meet the needs of digitally native students and adapt to the rapidly evolving educational landscape.

Despite the importance of teacher competence in improving teacher effectiveness and student learning, multiple studies have demonstrated that teachers globally exhibit low technological competence. Oliva et al. (2016) observed in their study on the teaching competence necessary for developing

the critical skills of primary school pupils in Spain that teachers focused on motivating students but lacked digital competence. The study by Lating (2009) revealed that teachers in Greater Arua possessed inadequate ICT skills. Similarly, a study done by Wamala and Seruwagi (2012) found that teachers demonstrated low competence and suggested that teacher competence be increased to improve the academic achievement of students.

It is worth noting that there are discrepancies in perceived competence between primary and secondary teachers, with primary teachers reporting higher competence in most aspects of teaching (Kang et al., 2020). Furthermore, the development of digital teaching competence among pre-service teachers is influenced by technology attitudes, operations, ethics, and data literacy, with data literacy playing a mediating role (Ng et al., 2023). Teacher training has been shown to improve competence, including pedagogical skills, which are essential for the teaching profession and distinct from other professions (Redjeki et al., 2021). Therefore, teacher competence is a dynamic and complex construct that is critical for the success of the learning process. It is influenced by various factors, including digital competence, pedagogical skills, and continuous professional development. The literature suggests that teacher competence can be enhanced through targeted training and professional development programs, which are essential for adapting to the evolving educational landscape.

Additionally, while some studies report high levels of digital competence and readiness for blended teaching (Gültekin & Enisa, 2023; Moreira et al., 2023), others highlight gaps in Technological Pedagogical and Content Knowledge (TPCK) competence and practical application of digital

techniques (Demeshkant, 2020; Tovar & Velasco, 2020). Additionally, the relationship between teaching competence and ICT integration suggests that professional development plays a crucial role in enhancing technological competence (Venessa & Bryan, 2024). The studies also indicate that teachers' experiences with online teaching during the pandemic were mixed, with both positive and negative aspects Baluyos and Clarin (2021), and that teachers' technological competence can vary based on factors such as age and professional seniority (Hursen, 2011).

To address the deficiencies in teacher competence, which in turn affect teacher performance, scholars recommend the development of a teacher competence framework. Teacher competence frameworks are designed to outline the essential skills, knowledge, and behaviours required for effective teaching and professional development. These frameworks are often closely related to professional demands and are used to guide teacher growth, as well as to standardize skills across educational contexts (Parviainen et al., 2024). Although there is broad agreement on the significance of teacher competence, the specific skills and knowledge required often vary depending on the educational context. For example, digital competence is particularly critical in higher education settings Tondeur et al. (2023), whereas global competence is emphasized in K–12 education (Hall & Hite, 2022). Additionally, the rapid transition to emergency remote teaching during the COVID-19 pandemic underscored the importance of teacher adaptability and the need for supervisory and professional development frameworks capable of supporting educators in responding effectively to unforeseen challenges (Cook, 2023). Additionally,

the literature reveals a lack of consensus on the nature of digital competence required for teachers, with different frameworks being developed for different educational levels (Basantes-Andrade et al., 2022; Norhagen et al., 2024; Tondeur et al., 2023).

All in all, teacher competence frameworks serve as vital tools for professional development and ensuring quality education. They must be adaptable to accommodate technological advancements and changing educational demands. The frameworks should also be inclusive of various competence, such as digital literacy and global awareness, to prepare teachers for diverse teaching environments and challenges. Thus, assessment of teacher competence is a complex and critical area of research that seeks to improve the quality of education by ensuring that teachers possess the necessary skills and knowledge. Therefore, the studies imply that while there are differences in competence levels based on various factors, there is a consensus on the need for continuous professional development and structured assessment tools to enhance teacher competence. Lastly, introducing formal mentorship programs for university staff and schools, as well as professional development courses for lecturers and senior teachers, could help improve teacher competence and the overall quality of education in Uganda (Bwiruka et al., 2021).

In summary, much as the previous studies are related to the current study, some gaps such as knowledge gaps, contextual and population gaps still exist for the current study to fill. First and foremost, findings of the previous studies indicate contradictions in the level of technological competence among teachers. While some studies report high levels of technological competence and readiness for blended teaching (Gültekin &

Enisa, 2023; Moreira et al., 2023). On the other hand, other studies highlight low technological competence and practical application of digital techniques (Demeshkant, 2020; Viera & SÃ¡nchez, 2020). Thus, little is known about the level of competence possessed by teachers in secondary schools in greater Arua. Additionally, the majority of the previous studies were undertaken outside of Greater Arua. Some studies were undertaken in primary schools (Wamala & Seruwagi, 2012), whereas some studies were conducted with instructors at the college (Afema, 2016; Hursen, 2011). To fill the existing gaps in the literature, this study was conducted to determine the status of technological competence among teachers in secondary schools in Greater Arua, using a mixed-method approach.

2.4 Directive Supervision and Teacher competence

The purpose of the literature review was to establish the relationship between directive supervision and teacher competence in secondary schools in Greater Arua. The review involved searching for relevant articles, textbooks, dissertations/theses and books from Google Scholar, Google Books and reports. Directive supervision involves providing personalized, ongoing contact with specific teachers to observe and support classroom instruction (Chen, 2018). In this approach, the supervisor determines the focus of lesson observations and offers direct guidance. Directive supervision is particularly suited for novice teachers who need structured support or for teachers who are struggling and require close monitoring and explicit direction (Appiah, 2018). Directive supervision, as a specific approach within the broader context of educational supervision, is characterized by a more authoritative and prescriptive interaction between the supervisor and the

supervisee. In the context of teacher supervision, directive supervision involves the supervisor providing explicit guidance, setting clear expectations, and closely monitoring teacher performance. This approach contrasts with more collaborative or nondirective methods, where the teacher may have greater autonomy and the supervisor acts more as a facilitator (Hoque, et al., 2020).

Directive supervision can play a significant role in shaping teacher competence, particularly for novice or struggling educators. By providing structured guidance and clearly defined expectations, this approach helps teachers develop leadership competence by modeling effective classroom management and decision-making strategies. It also supports professional learning competence, as teachers receive targeted feedback that identifies areas for improvement and guides them through concrete steps to enhance their instructional practices. In terms of assessment competence, directive supervision ensures that teachers understand how to design, administer, and interpret evaluations accurately, often through hands-on demonstrations and close oversight. Similarly, technological competence can be strengthened when supervisors provide explicit instruction and monitoring on integrating digital tools and educational technology into lessons. While directive supervision is most effective for teachers requiring close guidance, it lays the foundation for building confidence and skill in all four competence domains, ultimately preparing teachers to adopt more autonomous, reflective, and learner-centered practices over time.

Research has consistently shown a relationship between supervisory practices that provide direct assistance and the enhancement of teacher

competence (Akcan & Tatar, 2010; Appiah, 2018; Engin, 2015; Ghavifekr & Sani, 2014; Karnati, 2019; Malunda et al., 2016; Range, Young, & Hvidston, 2013; Sule, Ameh, & Egbai, 2015; Usman, 2015; Wubbels et al., 2007). Directive supervision, as a component of educational supervision, is characterized by providing explicit guidance and feedback to teachers. It is often employed to improve teachers' competence and job performance by offering clear instructions and expectations (Edgar et al., 2023). This approach can be particularly effective in contexts where teachers may require more structured support to enhance their instructional methods and meet educational goals (Abdallah & Alkaabi, 2023).

Evidence suggests that directive supervision can play a significant role in improving teacher competence and performance. For example, research conducted in Kuala Lumpur revealed a strong positive association between directive supervision and teachers' competence, performance, and attitudes (Hoque et al., 2020). This implies that, in certain settings or for particular teacher needs, a directive supervisory style may prove beneficial. Similarly, Ampofo et al. (2019), in their study on the effect of head teachers' direct supervision in public senior high schools, found that close monitoring of lesson planning and delivery by school heads greatly enhanced teacher competence and performance. These findings underscore the importance of supervisory guidance in supporting teachers to strengthen their instructional practices.

Directive supervision appears to be a significant factor in enhancing teacher competence. According to the findings of Edgar et al. (2022), directive supervision practices by close-to-school education officers in

Tanzanian public secondary schools have contributed positively to teacher competence as reflected in their job performance. This suggests that a clear and authoritative approach can be effective in certain educational contexts. However, the study also highlights that although directive supervision proved effective, its success largely depended on the context and the individual needs of teachers. Over-reliance on this approach could limit teachers' professional autonomy and creativity, suggesting that it may be most beneficial when balanced with other supervisory strategies. The inclusion of supportive and participative supervision strategies could further enhance teacher competence, suggesting a potential synergy between different supervisory approaches.

While directive supervision is associated with positive outcomes in job performance, it is not the only effective supervisory strategy. Supportive and participative supervision strategies are also recommended to improve teachers' work performance, suggesting that a balanced approach may be beneficial (Edgar et al., 2022). In support of the above assumption, literature indicates that supervision has evolved from rigid oversight to more supportive and tailored approaches, which implies that directive supervision may not be the only or most effective method in all contexts (Abdallah & Alkaabi, 2023; Zepeda et al., 2020). Moreover, the effectiveness of supervision also depends on the quality and position of the supervisor and the actors involved in the supervisory process, which can vary across different educational settings (Altun & Sarkaya, 2020). Several literatures also posit that much as directive supervision is an effective strategy for improving teacher effectiveness, the effectiveness of directive supervision may be

enhanced when combined with other supervisory strategies, and its impact can be influenced by the supervisory context and the actors involved (Alkaabi, 2023; Altun & Sarkaya, 2020; Edgar et al., 2022). Therefore, while directive supervision is a valuable tool, it should be considered as part of a broader supervisory approach tailored to the specific needs of teachers and educational institutions.

Perry et al. (2000) and Wubbels et al. (2007) emphasised that instructional supervision contributes to improved teacher competence, which in turn fosters teacher motivation and job satisfaction. As a result, Mohammed et al. (2015) posit that it is plausible to anticipate a positive correlation between specific elements of instructional supervision and improved learning outcomes. In a cross-sectional survey, Appiah (2018) further observed that school principals tended to prefer directive control over other supervisory approaches. The study also revealed that novice teachers, in particular, benefit from direct support provided by supervisors. It is worth noting, however, that most of these studies relied heavily on cross-sectional survey designs using structured questionnaires and interview guides. By contrast, the present study adopted a broader methodological approach, drawing data from head teachers, deputy head teachers responsible for academics, and classroom teachers through surveys, interviews and non-participant observation.

When teachers are given more influence over the evaluation process, this is known as directive informational supervision (Appiah, 2018). In this supervisory method, the supervisor establishes goals for the supervisee to reach and provides several options for achieving the goal. The directive

informational supervision approach is mainly applied to support experienced teachers as they advance in their professional growth, particularly in refining teaching strategies, classroom management, and student assessment. Findings from a study by Ampofo et al (2019) indicate that this supervisory style positively influences teacher role performance by providing guidance in lesson preparation, promoting punctuality, ensuring efficient use of instructional time, and facilitating lesson delivery in line with prepared lesson plans or notes. This was accomplished through consistent talks with teachers following classroom observation. Tyagi (2010) believes that directive informational supervision assists teachers in identifying gaps in their abilities, knowledge, and attitudes to give the necessary assistance for their professional development.

Nevertheless, while directive informational supervision may be effective in strengthening accountability and structure, it can also present certain limitations. Excessive reliance on prescriptive guidance may restrict teachers' professional autonomy and reduce opportunities for creativity and innovation in lesson delivery. Furthermore, in contexts where teachers are already highly skilled and self-motivated, such an approach might be perceived as micromanagement rather than professional support. Therefore, its effectiveness is likely to depend on the specific needs of teachers, the school culture, and the balance between directive supervision and more collaborative or developmental supervisory strategies.

Ozyildirim (2016), applying Glickman's developmental supervision model, found that supervisors and administrators largely preferred directive informational supervision when working with teachers of low competence,

rather than collaborative or non-directive approaches. In contrast, Strieker et al. (2016) reported that most university supervisors adopted collaborative and non-directive strategies to enhance teacher candidates' instructional skills. The divergence in findings may stem from methodological and contextual factors: Strieker's study was limited to a small sample of university supervisors, while Ozyildirim's research may have been shaped by organizational culture and differing interpretations of teaching practices. These contrasting outcomes suggest that the effectiveness of supervision styles may vary depending on teacher competence levels, institutional contexts, and the scope of supervisory responsibilities.

Directive supervision is a critical aspect of enhancing teacher competence, as it involves guidance and oversight aimed at improving teachers' abilities in the educational process (Aprilianto et al., 2022). The role of the principal's supervision is to strengthen teacher characteristics, such as understanding students' backgrounds and learning styles, which are essential for effective teaching in the information age (Surayya & Sumirah, 2021). Moreover, the types of directive expressions used by supervisors can influence the teacher-centred or student-centred nature of learning, with a higher frequency of directives leading to more teacher-centred learning environments (Kalule & Bouchamma, 2014; Muranda, 2018). Additionally, directive supervision, particularly instructional supervision, generally has a positive impact on teacher competence. It contributes to improved lesson preparation, assessment material development, and innovation in teaching (Jelagat et al., 2020).

The integration of information and communication technology (ICT) into supervisory practices has emerged as a critical tool for enhancing teacher competence, particularly in the context of disruptions such as the COVID-19 pandemic. ICT-enabled supervision allows supervisors to provide timely feedback, model best practices, and monitor instructional delivery remotely, which strengthens leadership competence by helping teachers manage classrooms and guide learners effectively even in virtual or hybrid environments (Mwawasi, 2014). It also fosters professional learning competence, as teachers can engage in online collaborative forums, webinars, and virtual mentoring sessions that promote reflective practice and continuous skill development. In terms of assessment competence, digital platforms enable supervisors to guide teachers in designing, administering, and analyzing assessments more efficiently and accurately. Finally, ICT-based supervision directly enhances technological competence, as teachers become familiar with integrating digital tools into their pedagogy, improving lesson delivery, and engaging students through interactive and innovative methods. Overall, ICT-enabled supervision not only supports professional growth but also encourages adaptability and resilience among teachers, ensuring sustained instructional quality in both traditional and digital learning contexts.

From the previous literature, it is important to note that directive supervision plays a significant role in fostering teacher competence, but it is only one aspect of the multifaceted nature of teacher skills and abilities. Effective teaching requires a combination of various competence, including pedagogical expertise, leadership, and the ability to integrate technology and

adapt to diverse educational contexts. Therefore, a comprehensive approach to teacher development that includes directive supervision as well as broader competence-building is essential for improving educational outcomes.

The reviewed studies highlight the importance of direct support and directive informational supervision. Evidence showing a positive and significant relationship between directive supervision and teachers' performance and attitudes suggests that, when effectively implemented, this approach can lead to improved instructional outcomes (Hoque et al., 2020). Generally, directive supervision is a structured approach that can be effective in certain professional settings for ensuring compliance and adherence to standards. However, the effectiveness of directive supervision may be influenced by contextual factors such as the teachers' level of experience, the school environment, and the extent to which it is balanced with more collaborative or developmental supervisory strategies. Over-reliance on a purely directive approach could potentially limit teacher autonomy and creativity in the classroom. It may also introduce challenges, particularly in fields where professional autonomy and reflective practice are valued. Balancing directive elements with supportive and developmental aspects of supervision may be necessary to optimise outcomes for both supervisees and their clients.

Despite the findings from the previous literature on the positive relationship between directive supervision and teacher competence, there are some gaps identified in the past literature. These gaps included population, contextual and methodological gaps. For example, some studies focused on student teachers (Thobega & Miller, 2008). In contrast, (Glanz et al., 2007)

examined the effects of supervision on students' academic achievement, while Ampofo et al. (2019) focused on its impact on teacher role performance. Despite these insights, the specific influence of supervision on teacher competence remains underexplored. Additionally, most of these studies were carried out outside Greater Arua and Uganda, which reduces their contextual applicability. To bridge this gap, the current study examined the relationship between directive supervision and teacher competence in secondary schools within Greater Arua, Uganda, using data collected from teachers, head teachers, and deputy head teachers.

2.5 Collaborative Supervision and Teacher Competence

The collaborative supervision approach involves the supervisor and teacher working jointly to address educational challenges without the use of directives (Silva et al., 2001). Its main objective is to build a cooperative partnership that promotes shared decision-making toward mutually established goals (Chen, 2018). In this model, the teacher and supervisor or sometimes a group of teachers collaborate to find solutions to classroom problems. Several studies have reported a positive link between collaborative supervision and teacher competence (Appiah, 2018; Glickman et al., 2010; Karnati, 2019; Thobega & Miller, 2008; Tyagi, 2010).

Karnati (2019) reported that teachers viewed collaborative supervision as an effective means of enhancing professional competence. Similarly, Appiah (2018) found a positive correlation between collaborative supervision and teacher job performance. The process involves joint decision-making through clarifying, listening, reflecting, presenting, problem-solving, and negotiating. Thobega and Miller (2008) noted that student teachers

preferred the collaborative model over other supervisory approaches. These findings highlight the importance of collaborative and collegial interactions between supervisors and teachers during the supervision process. While these studies support the relevance of collaborative supervision, most were conducted in developed countries and often focused on student teachers, as in the case of Thobega and Miller (2008). In contrast, the present study investigated collaborative supervision in a developing country context, with teachers, deputy head teachers, and head teachers as key participants, thereby addressing a gap in the literature.

The literature on collaborative supervision of teachers indicates techniques such as co-reflecting, clarifying, problem-solving and negotiating can significantly impact teacher performance and professional development. Co-reflection, or collaborative reflection, has been shown to have a significant impact on teacher competence and professional development. Research indicates that engaging in joint reflection processes can enhance various aspects of teacher competence, including content knowledge, pedagogical knowledge, and practical skills (Kulgemeyer et al., 2021). In the context of pre-service teacher education, peer group mentoring involving co-reflection has demonstrated the potential to create a common language and learning context for acquiring practicum knowledge, developing practical tools, and building inferential knowledge (Tiainen & Lutovac, 2022). This approach challenges the notion that reflection must be mentor-directed, suggesting that pre-service teacher-initiated reflection can be equally effective.

Putra and Hariri (2023) found that collaborative supervision models, which involve shared reflection and feedback among educators, contribute to improving teaching practices. These models often include the participation of principals, senior teachers, and peers in the supervisory process, fostering a supportive environment for teacher growth (Suwardi et al., 2020). Research indicates that the quality and nature of supervisory feedback are key factors in its impact on teacher development. For instance, a study of English for Speakers of Other Languages (ESOL) student teachers found that the relational dimension of feedback literacy, that is, the quality of the supervisor-teacher relationship, was most enduring in teachers' memories and practice (Clark-Gareca & Warkentin, 2024). Similarly, another study highlighted the importance of collaborative supervision practices, peer work, and constructive feedback in improving pedagogical intervention and creating learning communities (de Nazaré et al., 2020). Similarly, collaborative supervision models that incorporate peer evaluation have been shown to positively impact pedagogical competence and the quality of school performance, although the principal's motivation was found to moderate these effects to varying degrees (Singerin, 2021). Moreover, the use of information technology in diagnostic feedback supervision models is very effective in improving professional competence (Wiyono & Rasyad, 2021). This model emphasises independent development through a cycle of planning, implementation, and evaluation, supported by technology.

Furthermore, collaborative supervision has been identified as a significant factor in enhancing teacher competence. The studies reviewed provide evidence that collaborative models of supervision, involving

principals, senior teachers, and peers, contribute positively to teacher development and instructional quality (de Nazaré et al., 2020; Suwardi et al., 2020; Cravens & Hunter, 2021; Summaya & Aisha, 2011; de Oliveira & Jones, 2024) Zepeda et al., 2020; Wiyono & Rasyad, 2021). These models include various activities such as training, practice, co-planning, peer observation, feedback, and reflective practices. Peer observation involves colleagues observing each other's teaching practices, providing feedback, and collaborating to enhance instructional quality. In a Critical Theoretical Review of Global Practices, Nguyen (2021) found that peer observation was not only an assessment method but also a means for professional development since the process involved reflection on classroom practices.

However, while collaborative supervision is generally seen as beneficial, some studies highlight potential challenges. For instance, there can be confusion between supervision and evaluation, which may affect teacher and supervisor relationships (de Nazaré et al., 2020). Additionally, despite the positive influence of collaborative supervision on performance-based learning, it does not necessarily translate into direct improvements in student learning outcomes (Wiyono et al., 2021). Furthermore, the effectiveness of supervision is contingent upon the willingness of principals to engage in the process (Putra & Hariri, 2023).

Despite all the associated challenges, it can be inferred from the above literature that collaborative supervision is a valuable approach to teacher development, with evidence supporting its role in enhancing pedagogical competence and teacher performance. It encourages a culture of shared learning and continuous improvement among educators. Consequently, the

approach requires careful implementation to avoid conflating supervisory feedback with evaluative judgment, ensuring that the focus remains on professional growth rather than performance appraisal.

2.6 Non-Directive Supervision and Teacher Competence

Non-directive supervision allows teachers to develop their own plans while receiving limited guidance from the supervisor, using strategies such as presenting, clarifying, reflecting, encouraging, and problem-solving (Appiah, 2018; Karnati, 2019). In this approach, teachers take responsibility for creating their action plans, drawing on their capacity for self-analysis, self-evaluation, and the implementation of effective solutions. Non-directive supervision, as an educational approach, offers several potential benefits to teachers. It emphasises teacher autonomy and encourages the development of their abilities and creativity. Shehata (2019) discussed the use of flipped learning to enhance reflective teaching skills and learning autonomy among student teachers. This approach allows teachers to take more control of their learning process, which aligns with the principles of non-directive supervision. By not imposing full responsibility on the supervisor, non-directive supervision allows teachers to take charge of their professional growth and engage in reflective practices (Bencherab & Maskari, 2021). This form of supervision can lead to increased self-efficacy among teachers, as they feel more empowered and capable in their roles (Khun-Inkeeree et al., 2020).

Several studies have explored the relationship between non-directive supervision and teacher competence (Appiah, 2018; Karnati, 2019; Mudzofir & Mudawali, 2017; Thobega & Miller, 2008). For example, a study on

academic supervision in Indonesia found that principals supported teachers in making supervisory decisions collaboratively, allowing them to identify effective classroom practices. Similarly, Appiah (2018) reported that most teachers preferred non-directive supervision over direct support, highlighting a desire for autonomy in professional decision-making. Mudzofir and Mudawali (2017) observed a moderate positive relationship between non-directive supervision and teacher performance. Their findings showed that supervisors enabled teachers to explore multiple instructional alternatives, select the most appropriate strategies, and implement solutions independently, providing support where necessary. Karnati (2019) also noted that the majority of teachers believed non-directive supervision enhanced their professional competence.

Thobega and Miller (2008) examined the perceptions of student teachers regarding supervision from university supervisors and cooperating teachers. The study revealed that most student teachers favored non-directive supervision, indicating a preference for active involvement in supervisory decision-making alongside their supervisors. Collectively, these findings suggest that non-directive supervision is particularly effective in promoting teacher autonomy, critical thinking, and problem-solving skills, especially among teachers capable of independent professional judgment. Non-directive supervision, as a supervisory approach, is characterised by a focus on providing guidance and support to teachers without prescribing specific actions or behaviours. This approach is intended to empower teachers to reflect on their practice and develop their solutions to challenges in the classroom.

Non-directive supervision, as opposed to directive supervision, emphasises a supportive and collaborative approach, allowing teachers to reflect on their practices and encouraging professional growth. While Edgar et al. (2022) found that directive supervision practices contributed significantly to teachers' job performance in Tanzanian secondary schools, they also acknowledged the limited contribution of supportive and participative strategies, as key components of non-directive supervision. Conversely, Abdallah and Alkaabi (2023) and Purvi et al. (2019) highlight the evolution of supervision from rigid oversight to more supportive methods such as self-reflection, suggesting that these approaches can improve teaching and learning outcomes and teacher motivation, respectively.

While Khun-Inkeeree et al. (2020) indicated that heads of schools understand their supervisory roles, they may not effectively engage teachers in improving professional skills, and there is a lack of emphasis on the supervisory dimension of teaching, which could imply a need for more non-directive approaches. Moreover, Neyra et al. (2021) suggest that effective supervision, whether perceived by student-teachers or evidenced in English teaching centres, can improve teaching knowledge and skills, and teaching performance, respectively. While directive supervision has been found effective in certain contexts, there is evidence to suggest that non-directive supervision, with its supportive and collaborative nature, can also contribute positively to teacher effectiveness. The integration of non-directive strategies may enhance teacher motivation, self-efficacy, and professional development, ultimately leading to improved educational outcomes.

Despite the widely known benefits of non-directive supervision, the past researches present some contradictions regarding the effectiveness of non-directive supervision. The effectiveness of non-directive supervision may be constrained in situations where teachers lack sufficient experience or confidence, as minimal guidance could lead to inconsistencies in instructional quality or incomplete problem-solving. Additionally, without structured support, some teachers may struggle to translate reflection into practical improvements, suggesting that this approach is most effective when combined with occasional supervisory guidance tailored to the teacher's developmental needs. Hoque et al. (2020) found that directive supervision, as opposed to non-directive supervision, has a positive and significant relationship with teachers' performance and attitudes. Edgar et al. (2022), on the other hand, posit that a combination of supportive and participative strategies is recommended for improving job performance. This suggests that while non-directive supervision has its merits, it may not be universally applicable or effective in all educational settings.

Conversely, Castro-Rodríguez (2022) suggested that a collaborative approach, which can include non-directive elements, is associated with higher satisfaction among students regarding thesis supervision. This could imply that while directive supervision may lead to improvements in teacher performance and attitude, a non-directive or collaborative approach may be more satisfying for teachers in certain contexts. Educational institutions need to consider these findings and adapt their supervisory practices to the specific needs of their teachers since the effectiveness of non-directive supervision may vary based on context. Further research is needed to clarify the

conditions under which non-directive supervision is most beneficial for teacher competence. Therefore, this study intended to examine the relationship between non-directive supervision and teacher competence in secondary schools in Greater Arua, Uganda.

2.7 Chapter Summary

There have been studies on the influence of instructional supervision on relevant factors, such as teacher pedagogical practices, according to the reviewed literature. However, there are still gaps that the present investigation must fill. These deficiencies included gaps in knowledge, methodology, population, and theoretical and contextual understanding (Miles, 2014). The majority of this research is conducted outside the context of Uganda and Greater Arua in particular. Due to cultural differences and how supervision is viewed and interpreted in different situations, the findings may not be generalizable (Stark et al., 2017; Strieker et al., 2016; Ozyildirim, 2016; Tyagi, 2010; Thobega & Miller, 2008). This created a gap that the current study intended to fill.

There is a methodological gap in some of the prior investigations. Some of the researchers only employed quantitative designs, with questionnaires dominating (Ozyildirim, 2016; Strieker et al., 2016). Thirdly, some earlier studies employed teacher candidates (Strieker et al., 2016; Thobega & Miller, 2008). How student teachers perceive and implement supervision may differ from that of established teachers. Fourthly, the majority of investigations from the research literature found theoretical constraints (Nzabonimpa, 2009; Ozyildirim, 2016). These theories, which are supported by Glickman's (2010) developmental supervision, explain how

administrators oversee and support teachers based on their professional needs.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the research methodology adopted to investigate the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. It begins by outlining the philosophical orientation that guided the study and the overall research design chosen to address the research objectives. The chapter then describes the study participants, including their selection criteria, and the sampling procedures employed to ensure representative and relevant data. Detailed explanations of the data collection methods and instruments are provided, highlighting how they were designed to capture information on the dimensions of instructional supervision and the four domains of teacher competence: leadership, professional learning, assessment, and technological skills. Considerations of validity and reliability are discussed to demonstrate the trustworthiness of the findings, while the data analysis techniques section explains how collected data were processed and interpreted to answer the research questions. Finally, the chapter addresses the ethical considerations observed throughout the study, ensuring that participants' rights, confidentiality, and informed consent were fully respected. Collectively, these methodological procedures provide a robust framework for generating reliable and contextually relevant insights into the impact of instructional supervision on teacher competence in Greater Arua secondary schools.

3.1 Philosophical Orientation

Pragmatism is the philosophical underpinning that was adopted. A worldview championed by authorities such as Charles Sanders Peirce, William James, George Herbert Mead and John Dewey. Pragmatism, as a research paradigm, is concerned with “what works” Patton (2002) and orients itself towards practically solving problems (Creswell, 2009). It rests on the argument: “Truth” can only be measured by its “practical issue.” Furthermore, if an assumption, perception, or claim makes no practical difference, it fails to put us into a closer connection with “reality”. Rather than prioritizing specific methods, researchers adopting a pragmatic stance place emphasis on the research problem itself, employing multiple approaches as necessary to gain a comprehensive understanding. Pragmatism therefore provides flexibility in addressing diverse research questions and fosters collaboration among researchers irrespective of their underlying philosophical orientations. This promotes methodological eclecticism by using pluralistic approaches to understand the problem (Johnson & Onwuegbuzie, 2004).

Pragmatism offers a valuable philosophical framework for understanding instructional supervision and teacher competence. The pragmatic approach emphasises practical applications, multiple perspectives, and reflective practice (Klockner et al., 2020; Amelia et al., 2021). Furthermore, Pragmatism is based on the principle that researchers should adopt the methodological approach that best suits the particular research problem under investigation (Kaushik & Walsh, 2019).

In pragmatism, objectivist ontology states that reality can be discovered scientifically using statistical methods, and the subjectivist

ontology states that reality can be discovered through individual perceptions, feelings and experiences (Amelia et al., 2021). Thus, this study adopted a mixed-methods approach that employed both quantitative (Objectivist ontology) and qualitative approach (Subjectivist ontology). Furthermore, objectivist epistemology believes that truth should be obtained from quantifiable data, while subjectivist epistemology advocates that truth should be determined by individual feelings, perceptions, experiences and meanings. In line with the pragmatic paradigm, this study employed multiple data collection methods to generate a comprehensive understanding of the phenomenon. Pragmatism emphasizes the use of approaches that are most effective for addressing the research problem; therefore, surveys and observations, aligned with an objectivist epistemology, were combined with interviews that reflect a subjectivist stance. This integration made it possible to capture both quantifiable patterns and participants' lived experiences, thereby providing deeper insights into the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua.

In summary, pragmatism is grounded in the idea that researchers should employ the methodological approach most appropriate for addressing the research problem. In the present study on supervision in secondary schools in Greater Arua, this philosophical stance justifies the use of a mixed-methods design. By combining quantitative surveys with qualitative interviews and observations, the study captures both measurable patterns of supervision practices and the deeper contextual insights from teachers, head teachers, and deputy head teachers. This integration enhances the validity of

the findings and provides a more holistic understanding of how instructional supervision influences teacher competence in the Ugandan context.

3.2 Research Approach

The study adopted a mixed methods design, integrating both quantitative and qualitative approaches to effectively achieve its objectives. According to Dawadi et al. (2021), mixed methods research merges and harmonizes various data sources, enabling a more comprehensive examination of complex issues and enable purposeful data consolidation, allowing researchers to gain a broad understanding of a phenomenon by examining it from different perspectives and research lenses. In this study, the quantitative method facilitated the collection of a large volume of data from a broader population by capturing respondents' opinions on the relationship between instructional supervision and teacher competence, thereby enabling the generalisation of findings (Maritasari et al., 2020). Complementing this, the qualitative approach provided richer, in-depth insights into teachers' and supervisors' experiences, offering contextual understanding that numbers alone could not capture (Kumar, 2014).

Critically, the use of mixed methods was especially appropriate for supervision research because supervision is both measurable in terms of outcomes, such as teacher competence and performance, and interpretive in terms of lived experiences, such as how teachers perceive supervisory interactions and professional growth. A purely quantitative approach would risk reducing supervision to numerical associations, while a purely qualitative approach might overlook patterns and generalisability. By combining both, the study was able to capture not only the scope of supervision practices in

Greater Arua but also the depth of meaning attached to them, offering a more holistic and balanced understanding.

3.3 Research Design

In this study, a concurrent parallel mixed-methods design was employed. According to Creswell (2012), this design involves collecting quantitative and qualitative data simultaneously, analysing them separately, and then converging or integrating the results to provide a comprehensive analysis of the study phenomenon. The concurrent parallel design was highly appropriate for investigating the relationship between instructional supervision and teacher competence, as it enabled the collection of complementary forms of evidence within the same timeframe. While quantitative data provided measurable trends and patterns regarding the effect of supervision on teacher performance, qualitative data captured participants' lived experiences, perceptions, and contextual nuances that numbers alone could not reveal.

The use of this design addressed a key challenge in supervision research in that supervision is not only an observable and quantifiable practice but also an interpersonal and context-dependent process. A single-method design might risk overlooking either the measurable outcomes or the deeper experiential meanings. By integrating both strands of evidence, the concurrent parallel design offered a more balanced and holistic understanding, strengthening both the validity and the practical applicability of the findings in the context of Greater Arua.

Through the use of a concurrent mixed-method design, the researcher gained a more holistic view of instructional supervision and teacher competence. The quantitative data provided information on respondents'

opinions on the study variables, while the qualitative data explained participants' perceptions and experiences of the phenomenon being investigated (Tang et al., 2021). This comprehensive approach was particularly valuable in this study, where complex human interactions and experiences play a crucial role in outcomes. The quantitative component of the study provided statistical evidence of the relationship between directive, collaborative, and non-directive supervision and teacher competence.

Meanwhile, the qualitative approach captured participants' perspectives on the implementation of these supervisory dimensions and the status of teacher competence, offering insights that could not be obtained through quantitative data alone. Both types of data were collected concurrently and integrated during the interpretation of the overall findings. This approach enabled a more comprehensive understanding of the complex phenomenon by combining numerical trends with contextual, experiential insights. Consequently, it allowed the researcher to capture a broader and more nuanced picture of the relationship between instructional supervision and teacher competence, enhancing the quality of the data and the depth of the analysis.

To integrate the findings, quantitative and qualitative results were compared and interpreted during the analysis phase through triangulation. Quantitative survey data on teacher competence and supervisory practices were aligned with qualitative interview and observation insights to identify points of convergence, divergence, and complementarity. For example, if survey data indicated high effectiveness of directive supervision, interview data were examined to understand teachers' experiences, perceptions, and

contextual factors that may explain or nuance those patterns. This approach ensured that both numerical trends and contextual insights were considered, providing a robust and nuanced understanding of how instructional supervision influences teacher competence.

3.4 Population and Sampling

3.4.1 Target Population

Creswell (2009) defines a target population as the group of individuals from whom a researcher intends to collect data in order to make generalisations and draw conclusions. In the present study, the target population comprised all secondary school head teachers, deputy head teachers, and subject teachers in Arua City and Arua District. At the time of data collection, there were 36 government and private schools in Greater Arua, with the following statistics of teachers: Arua district had 07 Government secondary schools with 236 teachers, and 09 private secondary schools with 139 teachers. Arua city had 09 Government secondary schools with 356 teachers and 11 private secondary schools with 169 teachers. Accordingly, there were 36 head teachers, 36 deputy head teachers in charge of academics, and 900 subject teachers from 36 secondary schools in Greater Arua, which includes Arua City and Arua District. This resulted in a parent population of 972 individuals.

3.4.2 Sample Size and Sampling Techniques

3.4.2.1 Sample Size

A sample is defined as a subset of the target population that is formally selected to represent the entire population (Onen, 2016). According to Wiersema and Bowen (2009), a sample size of approximately thirty percent of

the population is sufficient to ensure reliability and validity. In this study, Krejcie and Morgan's (1970) table was used to determine the appropriate sample size. The table provides a widely recognized, statistically grounded method for selecting sample sizes that are representative of a given population, ensuring that the results are reliable and generalizable. By using this approach, the study was able to identify a sample that balances practical feasibility with the need for sufficient data to make valid inferences about the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua. Accordingly, the study sample comprised 269 teachers, 10 head teachers, and 10 deputy head teachers responsible for academics.

3.4.2.2 Sampling techniques

This study employed a mixed-method sampling approach, combining simple random sampling for the quantitative component and purposive sampling for the qualitative component, a strategy identified by Kumar (2014) as mixed sampling. Mixed sampling combines aspects of both probability and non-probability sampling techniques. Simple random sampling was applied to give each member of the population an equal opportunity to be selected (Creswell, 2009). To ensure representativeness, the sample size was determined using Krejcie and Morgan's (1970) sampling table. According to their guidelines, and assuming a 95% confidence level with a 5% margin of error, a total of 269 teachers were selected from a population of 900 teachers in secondary schools across Greater Arua. Krejcie and Morgan's table is reliable because it is based on standard principles of determining sample size.

Secondly, it is easy to use, especially when the total population is known. Thirdly, it reduces biases since it is widely recognised by researchers.

A purposive sample was used to get study participants for interviews. Out of the 36 secondary schools in Greater Arua, ten schools were selected, and from these, ten head teachers and ten deputy head teachers in charge of academics were purposively chosen to participate in the study. All female head teachers were included due to their limited number, ensuring that their perspectives were captured. Head teachers, being responsible for the day-to-day administration and management of the schools, provided key information on the status of teacher competence and oversaw routine instructional supervision and curriculum administration. Deputy head teachers in charge of academics played a crucial role in developing and supervising the implementation of the school's academic plans, programs, and timetables.

To ensure that the selected schools represented the diversity of the study area, a stratified random sampling technique was employed (Shagofah et al., 2022). Stratification was carried out based on school ownership (government-aided and private) and location (urban and rural), as these factors were considered likely to influence both instructional supervision practices and teacher competence. Following stratification, a simple random sampling technique was used to select 269 teachers from a total population of 900. This method ensured that teachers from each category had an equal chance of being included in the study, enhancing the representativeness of the sample. Consequently, this approach allowed for the generalisation of the findings to the broader population of secondary school teachers in Greater Arua. The teachers shared their opinions on how they interact with

supervisors during supervision. Secondly, the various competence displayed by teachers through lesson observation were determined. The following table shows the study respondents and the sampling techniques used.

Table 3. 1

Sample of Research Participants

Participants	Target Population	Sample Size	Sample Technique
Teachers	900	269	Simple random sampling
Headteachers	36	10	Purposive
Deputy head teachers-academics	36	10	Purposive
Total	972	289	

Source: *Primary data (2022); Krejcie & Morgan table (1970)*

3.5 Methods of Data Collection

The study employed both quantitative and qualitative research approaches to provide a comprehensive understanding of the phenomenon. Data were collected using a combination of interviews, non-participant lesson observations, and cross-sectional surveys, enabling the researcher to capture both measurable trends and in-depth insights into instructional supervision and teacher competence.

3.5.1 Semi-Structured Interviews

To gather thick and credible data, semi-structured interviews were used in this study. They provide flexibility while maintaining a structured approach, allowing researchers to explore topics in-depth and adapt to participants' responses (Natalie & Deanna, 2021). Moreover, semi-structured interviews enabled the generation of rich, detailed data. The researcher was able to

develop a deeper understanding of the phenomenon because semi-structured interviews allowed for clarification and the collection of additional information (Thille et al., 2021). According to Kothari (2004), interviews provide flexibility, enable observation and interpretation of body language, and allow the researcher to probe for information that surveys cannot easily capture. This approach facilitated direct interaction with participants, enabling the researcher to obtain detailed explanations regarding the application of different dimensions of instructional supervision and the current status of teacher competence in secondary schools in Greater Arua.

The use of semi-structured interviews aided the researcher in triangulating data sources by gathering rich data from different secondary school head teachers and deputy head teachers in charge of academics. Thus, research participants provided information on the application of instructional supervisory approaches and the degree to which secondary school teachers in Greater Arua possess the various competence to enable them to perform at an acceptable level.

3.5.2 Non-participant Observation

The non-participant observation was utilised, in which data were collected by observing teachers' lessons. The unit of observation in this study was individual teachers, whose classroom practices were observed to assess their competence levels. Non-participant observation was employed, meaning the researcher collected data by observing teachers' lessons without interfering with the teaching process. Teachers were selected as the focus because they are the primary recipients of instructional supervision and the main agents through which supervision impacts teaching quality and learner outcomes.

The key tasks during observation were observing, listening to, and recording classroom happenings and making conclusions from the observation. This approach allowed the researcher to maintain objectivity and minimise their influence on the observed subjects, providing a more authentic view of the studied environment (Pass, 2020). Observing their lessons provided direct, practical insights into how supervisory approaches translate into classroom practices and teacher competence. Non-participant observation enabled the collection of rich primary data on the different competence exhibited by teachers during instruction. Thus, used for the triangulation of data from the survey and interviews to come out with more adequate data.

3.5.3 Survey

A survey involves gathering information through structured questions designed to understand the phenomenon being studied. Survey research is a widely used and flexible method in social sciences, which allows gathering of information from a large population and measuring public attitudes and orientations effectively (Isahaque et al., 2022). The closed-ended questionnaire was the primary instrument for data gathering. The primary instrument for data collection was a closed-ended questionnaire. The survey method enabled the collection of data from a large, literate population in a cost-effective and efficient manner. In addition, the survey method allowed for the representation of a broad population, capturing perspectives from a wide range of teachers across different schools. By using standardized questions, the approach ensured consistency in data collection, which enhances the reliability and comparability of responses. This standardization also facilitated the aggregation and analysis of data, enabling the researcher

to identify patterns and trends in teacher competence and supervisory practices. Consequently, the use of surveys supported the generalization of the findings to the larger population of secondary school teachers in Greater Arua, providing a robust basis for drawing conclusions about the relationship between instructional supervision and teacher competence (Ingleby et al., 2012).

3.6 Research instruments

In this study, interview guide, observation protocols and questionnaire were employed as instruments for data collection. Using different research instruments allowed the gathering of rich data for triangulation purposes.

3.6.1 Semi-structured Interviews Guide

Semi-structured interview guides are widely used in qualitative research for their flexibility and ability to elicit rich, in-depth data. Semi-structured interview guides allow researchers to focus on specific topics while maintaining the flexibility to explore emerging themes. They provide a framework for consistency across interviews while allowing for individualised probing and follow-up questions (Bearman, 2019). An interview guide was developed as the main tool for data collection, incorporating both core and follow-up questions to explore issues that surfaced during the discussion. The semi-structured format allowed the conversation to progress naturally and enabled adjustments to the questions based on participants' responses, as recommended by (Gogo & Musonda, 2022). Through the interview guide, information on the application of the dimensions of instructional supervision was gathered. Secondly, it facilitated the generation of information on the level of competence possessed by

teachers in secondary schools in Greater Arua. Information gathered through the interview guide also provided the content of the proposed teacher competence framework.

3.6.2 Non-participant Observation Schedule

Participants were observed utilising a classroom observation schedule as a technique for direct observation. The classroom observation schedule was used to collect data on observed teacher competence. As postulated by Alkalah (2021), non-participant classroom observation schedules are valuable tools for assessing teaching practices and student engagement without directly interfering with the learning environment. These schedules provide researchers and educators with a structured approach to gathering data on classroom dynamics, teaching behaviours, and student responses (Mahlambi et al., 2022).

As posited by Zhao and Ko (2020), maintaining a non-participatory role enabled observers to gather unbiased information about classroom interactions, teaching methods, and student engagement. This approach allows for a more accurate representation of typical classroom practices without the observer's presence influencing the dynamics. Additionally, the observation schedule gathered a comprehensive assessment of classroom practices, since it was designed to capture various aspects of teaching and learning, including pedagogical practices, classroom management techniques, and student participation (Asgari et al., 2021). This comprehensive approach provided a holistic view of the educational environment.

The schedule was separated into sections on demographics, classroom observation scales, and interview questions for teachers. The Classroom

Observation Scale (COS) rated teachers on four levels, namely, Outstanding (4), Good (3), Satisfactory (2) and Unsatisfactory (1). The key competence levels were defined as follows: Outstanding (4): The teacher has demonstrated a high level of competence. The teacher is a model of excellence in classroom practices. Good (3): The teacher demonstrated a fair level of competence. The teacher requires close mentorship to improve on a few aspects of teaching. Satisfactory (2): The teacher demonstrated low competence in most aspects of teaching. The teacher needs more directive supervision; Unsatisfactory (1): The teacher demonstrated a very low level of competence. The teacher needs coaching on specific teaching areas by the supervisor or senior colleagues.

The COS consisted of teacher leadership competence, assessment competence and technological competence. The portion on teacher interview questions was administered immediately following classroom observation to provide further information on teacher professional learning competence. Taking into account gender and years of experience, four teachers per school whose lessons appeared on the teaching schedule on the day of the visit were observed.

3.6.3 Questionnaire

Among the tools used for data collection, questionnaires were designed as written sets of questions presented to respondents (Kothari, 2004). The choice of questionnaires was justified by their wider reach and their ability to minimize the influence of direct researcher–participant interaction. They offer a systematic and standardized approach for gathering information on attitudes, behaviours, and motivations across various contexts (Saginova et

al., 2020). In addition, questionnaires made it possible to efficiently obtain quantitative data from large groups of participants.

The teacher questionnaires were divided into three sections: demographic details and Likert scale items. Section A collected background information such as age, gender, academic qualifications, and years of teaching experience. Section B contained Likert scale questions that assessed the implementation of different aspects of instructional supervision. Section C on the level of teacher competence. Section D on directive supervision and teacher competence. Section E had items on collaborative supervision and teacher competence. Section F contained question items on non-directive supervision and teacher competence. To gauge participants' perspectives on the connection between instructional supervision and teacher competence, a four-point Likert scale was applied. The scale categories ranged from strongly agree (4) to strongly disagree (1), thus preventing a neutral response, which may result in a central tendency effect. This can lead to more decisive data and potentially reveal stronger opinions, especially when exploring attitudes or beliefs. It simplifies analysis by reducing the response options compared to scales with more points, which can be beneficial when sample sizes are limited.

3.7 Validity and Reliability of Research Instruments

3.7.1 Validity of Research Instruments

The researcher guaranteed the reliability and relevance of the data by making sure that both the questionnaire items and interview questions were directly linked to the study objectives. According to Mugenda and Mugenda (2009), validity refers to the extent to which the research results truly reflect the

phenomenon under investigation. In this study, particular emphasis was placed on content validity, face validity and construct validity, in line with the recommendations of (Ingleby et al., 2012).

3.7.1.1 Content Validity

Content validity was determined by carefully reviewing the research instruments to ensure that they fully addressed all key aspects of the variables under study. The tools were evaluated by the research supervisor and other academic specialists, who assessed their clarity, relevance, and adequacy in responding to the research questions. Their feedback was incorporated to refine and improve the instruments, making sure the questions were well-phrased, unbiased, and aligned with the conceptual framework and study objectives. This rigorous validation process enhanced both the credibility and effectiveness of the data collection tools. To further strengthen validity, ten experts in educational management and instructional supervision were consulted. They were asked to judge each item as either relevant or irrelevant, and the Content Validity Index (CVI) was then computed using the appropriate formula.

$$CVI = \frac{\text{Average number of items rated as valid}}{\text{Total number of items}}$$

where R represents the number of relevant items and n denotes the total number of items in the instrument. Based on this calculation, the questionnaire achieved a CVI of 0.84, as shown in Table 3.2.

Table 3. 2

Content Validity Index Results

Items	No of Items	CVI
Instructional supervision		
Directive Supervision	5	0.85
Collaborative Supervision	5	0.88
Non-Directive Supervision	5	0.86
Teacher Competence		
Leadership Competence	8	0.83
Professional learning Competence	8	0.79
Assessment Competence	8	0.84
Technological Competence	8	0.82
Average CVI		0.84

Source: Primary Data, 2023

This shows a CVI of 0.84, which is above the threshold which is 0.70. A CVI value above 0.70 indicates that the items on the research instruments are judged by experts to be relevant, clear, and representative of the construct being measured. Therefore, a CVI of 0.84 confirms that the instruments are valid and suitable for accurately capturing data on instructional supervision and teacher competence in secondary schools. The Content Validity Index (CVI) is important because it ensures that survey and interview instruments accurately measure the concepts they are intended to assess. By having experts evaluate each item for relevance, clarity, and representativeness, CVI helps to confirm that the questions cover all critical aspects of the constructs, such as instructional supervision and teacher competence. Instruments with high content validity reduce the likelihood of ambiguous or irrelevant items, which can introduce measurement errors and undermine reliability. Consequently, a high CVI not only confirms the validity of the instruments but also enhances the consistency and trustworthiness of

the data collected, supporting reliable conclusions from both quantitative and qualitative analyses.

3.7.1.2 Construct Validity

To ensure that the research instruments accurately measured the intended constructs, construct validity was assessed by examining the relationship between scores obtained from two different instruments, namely, the questionnaire and the interview guide. Construct validity refers to the extent to which a test or instrument measures the theoretical construct it is intended to assess (Cohen et al., 2013). A pilot study was conducted as a preliminary trial to evaluate the feasibility of the full-scale study, validate the research approach, and identify areas requiring revision. During the pilot, data were collected using both instruments, and the correlation between responses measuring the same constructs, instructional supervision and teacher competence was analysed. Necessary adjustments were made based on the pilot findings to enhance the clarity, consistency, and effectiveness of the instruments before full-scale data collection.

3.7.1.3 Face Validity

Face validity was assessed to determine whether the research instruments appeared, on the surface, to measure the intended concepts. The questionnaire was reviewed by academic supervisors and experts in educational management to evaluate its clarity, wording, relevance, and overall appropriateness in addressing the study objectives. This review process helped ensure that the items were understandable, contextually appropriate, and logically structured, thereby increasing the credibility of the instrument. As noted by Creswell (2012), establishing face validity enhances practitioners'

confidence in the results obtained, as the instrument appears credible and suitable for its intended purpose. Feedback from the supervisors led to the refinement of certain items to enhance their presentation and alignment with the research constructs. This process contributed to the overall trustworthiness and acceptance of the instrument by both academic reviewers and research participants.

3.7.2. Reliability of Research Instruments

Reliability in research refers to the consistency and replicability of results across different studies or measurements (Sumrin & Gupta, 2021). In this study, to ensure reliability, the questionnaire for teachers was pre-tested once on 26 teachers from selected secondary schools in the Koboko district and municipality, which share similarities with Greater Arua. The results from the pilot test were entered into SPSS version 26, and Cronbach's coefficient (alpha) was computed. The reliability coefficients test results for the questionnaire were 0.814 (see Table 3.3). This value was deemed suitable by the researcher, thereby confirming the appropriateness of the research instrument for the study. According to Cronbach (1970), a coefficient of 0.7 or higher is considered acceptable.

Table 3. 3
Reliability Coefficients Test Results for Questionnaire

Constructs	No. of Items	Cronbach's Alpha (α)
Instructional supervision		
Directive Supervision	5	0.73
Collaborative Supervision	5	0.80
Non-Directive Supervision	5	0.74
Teacher Competence		
Leadership competence	8	0.88
Professional learning	8	0.79
Assessment	8	0.87
Technological	8	0.78
Cronbach's Alpha (α) overall reliability	47	0.814

Source: Primary Data, 2023

The result (0.814) on Table 3.3 above confirmed that the questionnaire items were sufficiently reliable for data collection and could consistently measure the intended constructs related to instructional supervision and teacher competence in secondary schools in Greater Arua.

3.7.2 Trustworthiness in Qualitative Research

In qualitative research, trustworthiness is essential for guaranteeing that the findings are valid. It is evaluated using key criteria such as credibility, transferability, dependability, and confirmability (Kakar et al., 2023). These criteria help establish the overall quality and rigour of qualitative studies, addressing concerns about the subjective nature of such research (Megheirkouni & Moir, 2023). To ensure the trustworthiness of the qualitative data, tests of credibility, dependability, transferability, and confirmability were conducted to verify the validity and reliability of the instruments used.

As noted by Kumar (2014), credibility reflects the extent to which participants view the findings as accurate. In this study, credibility was

strengthened through prolonged engagement and the use of triangulation. Dependability, on the other hand, examines whether similar outcomes would be obtained if the research were repeated under the same conditions. Transferability concerns the applicability of results to other contexts, which in this case was supported by providing detailed descriptions of the research setting, enabling readers to judge relevance to their own environments. Confirmability relates to whether the findings can be substantiated by others (Kumar, 2014; Riggs, 2017). It was ensured by maintaining neutrality and presenting participants' perspectives rather than the researcher's personal views.

In conclusion, trustworthiness in this study was upheld through debriefing, that is by seeking participants' views and expressions on the validity of the results. Dependability and transferability can be further assessed by future researchers who apply a rigorous and transparent data collection process. Moreover, methodological and data triangulation were employed to strengthen authenticity (Kyngäs et al., 2020; Martyn, 2007). Triangulation was achieved by using multiple data sources and methods to enhance the credibility and depth of the findings. Semi-structured interviews with head teachers and deputy head teachers were complemented by classroom observations of teachers, allowing the researcher to compare reported supervisory practices with actual classroom behavior. This combination enabled cross-verification of data, providing a more comprehensive and trustworthy understanding of how instructional supervision influences teacher competence. The convergence of insights from

different sources and methods enriched the analysis and reduced the risk of bias.

3.8 Data Collection Procedure

In order to access the research sites, introductory letter was obtained from the Directorate of Research and Graduate Training, Kyambogo University, to introduce him to the head teachers of secondary schools in greater Arua. Before embarking on data collection, four research assistants were recruited and trained on the research content and process. These were lecturers from Muni University and National Teachers' College, Muni. Lecturers have advanced knowledge in pedagogy, curriculum design, and assessment, making them well-positioned to critically evaluate teaching practices. Their expertise enabled them to objectively assess how well teachers implement instructional strategies aligned with the curriculum standards. Additionally, university lecturers are trained in educational research and can systematically collect data through structured lesson observation tools. Their ability to link observed practices with theoretical frameworks strengthened the academic rigour.

On notification of the different schools of the data collection programme, the research team visited each school and was introduced to the teachers by the head teacher. The head of the research team introduced four other team members to the teachers. Before the commencement of data collection, in each school, the purpose of the study and key ethical considerations were explained to the teachers to seek their voluntary participation. As soon as consent was granted by research respondents, the research team collected data from teachers, deputy head teachers and other

teachers. Questionnaires were administered to teachers by all the team members. As one researcher interviewed the head teacher and deputy, four researchers each observed the lesson that was running at the time of the visit.

In a concurrent mixed methods approach, data collection occurred almost at the same time. Qualitative data on the status of teacher competence were gathered through individual face-to-face interviews with head teachers and deputy head teachers in charge of academics. Similarly, questionnaires and non-participant observation were utilised to acquire quantitative data from teachers. Quantitative data were used to corroborate information acquired through interviews and to investigate the relationship between instructional supervision and teacher competence.

3.9 Data Management

The process of gathering, storing, retaining, and retrieving data is known as data management (Bennett et al., 2001). To ensure the validity of the data, the correctness and security of the data were ensured, and only the essential data was collected fairly and lawfully (Martyn, 2007). To minimise missing data and outliers, research assistants were trained in adequate data recording, storage, and retention procedures. During data collection, only data relevant to the study were collected and stored in a computer with a password. Hard copy questionnaires and transcripts were stored in a lockable cabinet to avoid loss and access by unauthorised persons. Data were only retrieved for analysis and coding by the principal researcher.

3.10 Data Analysis

The study employed descriptive, inferential, and thematic techniques to analyse the data. Using a convergent parallel mixed-method design,

qualitative and quantitative datasets were examined independently before being integrated at the interpretation stage. In this case, teachers served as the primary unit of observation and analysis. Thus, the study aimed at assessing their knowledge, understanding, skills, abilities, and attitudes exhibited during the teaching-learning process, and how these attributes are influenced by instructional supervision.

This study adopted a side-by-side data analysis approach, where quantitative statistical findings were presented first, followed by qualitative results that either supported or challenged those findings. Qualitative data were examined both during and after data collection using thematic analysis techniques (Ishtiaq, 2019). While collecting data, preliminary sources such as field notes, memos, and audio recordings were analysed to refine the study's focus, define its scope, and shape analytical arguments (Dawadi et al., 2021). Once data collection was complete, interview recordings were transcribed (Manser & Mitchell, 2012). Semi-structured interviews addressing the first objective on exploring the application of instructional supervision dimensions, were subsequently analysed through thematic analysis. Similarly, data on objective two, which sought information on the status of teacher competence, were gathered using semi-structured interviews and analysed using a thematic analysis approach. The data were organized according to key constructs, which enabled coding and the identification of themes relevant to the study objectives (Brenner, 2006; Lapan et al., 2011).

Quantitative data were examined through both descriptive and inferential statistics, including Pearson's correlation to assess relationships between independent and dependent variables, and regression analysis to

determine the strength and role of these relationships. At the univariate level, each variable was analysed individually using descriptive statistics for objectives one and two, with the results presented as percentages, means, and standard deviations. At a bivariate level, data were analysed using the Pearson r -coefficient to test the null hypotheses 1, 2, and 3, to establish the correlation between the study variables. Data for objectives one through five were cleaned, coded, and entered into SPSS version 26 for analysis. Descriptive statistics were employed to analyse the univariate data, with results displayed in frequency tables and summarized using percentages, means, and standard deviations.

Pearson's correlation coefficient was used to measure the strength of the relationships. Pearson's correlation coefficient was preferred over other correlation measures, such as Spearman's rho, because it is specifically designed to assess the strength and direction of linear relationships between continuous, normally distributed variables. In the context of this study, both the independent variable (instructional supervision) and the dependent variable (teacher competence) were measured on interval or ratio scales, making Pearson's correlation the most appropriate choice. Unlike Spearman's rho, which is a non-parametric measure suitable for ordinal data or non-linear relationships, Pearson's correlation provides a more precise estimate of the degree of association between variables when the data meet parametric assumptions. Additionally, Pearson's coefficient allows for a straightforward interpretation of the magnitude and direction of relationships, which is particularly useful for evaluating how different dimensions of supervision (directive, collaborative, and non-directive) are linearly associated with

teachers' leadership, professional learning, assessment, and technological competencies in secondary schools.

At a multivariate level, each dimension of IV (Directive, collaborative and Non-directive) was regressed to the DV (Teacher competence) to ascertain the strength of the relationship. Multiple linear regression was applied to assess how the different dimensions of instructional supervision relate to teacher competence (Wiersma, 2005). In this study, it was employed to determine how the different dimensions of instructional supervision: directive, collaborative, and non-directive, collectively influence teacher competence across leadership, professional learning, assessment, and technological domains. Unlike simple correlation, which assesses the relationship between two variables at a time, multiple linear regression allows the researcher to control for the influence of other variables, providing a more comprehensive understanding of how each supervisory approach contributes to variations in teacher competence.

To ensure the validity of the regression analysis, several key assumptions were considered (Creswell & Cresswell, 2023; Gogo & Musonda, 2022). First, linearity assumes a straight-line relationship between the independent variables and the dependent variable, which was supported by preliminary scatterplots. Second, independence of errors assumes that residuals are not correlated, which was addressed through proper sampling and study design. Third, homoscedasticity requires that the variance of residuals is constant across levels of the independent variables, verified through residual plots. Fourth, normality of residuals ensures that the residuals are approximately normally distributed, checked using histograms and normal

probability plots. Finally, absence of multicollinearity among the independent variables was confirmed using variance inflation factor (VIF) statistics. Meeting these assumptions strengthens the methodological rigor of the study and ensures that the regression results provide reliable and interpretable insights into how instructional supervision affects teacher competence.

In order to ensure that the relationship between instructional supervision and teacher competence was accurately examined, several measures were taken to control for extraneous variables. In the first place, a stratified random technique was used to ensure that schools of different categories, such as urban, rural, government, private, day, boarding, mixed and single schools were represented. These schools were selected from a similar socio-economic environment within Greater Arua to minimise disparities caused by infrastructure or resource availability. Secondly, teachers' demographic variables such as gender, academic qualifications and teaching experience were collected. During data analysis, these variables were statistically controlled using multiple regression to isolate their effects. Thirdly, the same validated questionnaires and observation checklists were administered to all participants to ensure uniform measurement of instructional supervisory practices and teacher competence. Finally, data were collected within the same school term to avoid variations due to different school schedules, examinations or holiday effects.

3.11 Research Dissemination

The study sought to investigate how instructional supervision relates to teacher competence in secondary schools in Greater Arua, Uganda. The findings were disseminated to various stakeholders in the form of

presentations at national and international conferences. Additionally articles were published in peer-reviewed journals. The findings were presented at the 2nd East African Regional Education conference in Dar Es Salaam, and two articles were published in international peer-reviewed journals. The purpose of dissemination was to enable research findings to inform education stakeholders on the strategies for the development of teacher competence. Second, this might also alert education stakeholders to enforce training, seminars, workshops and refresher courses on school-based supervision.

3.12 Ethical Considerations

Ethical considerations were carefully observed to ensure that the research process did not disrupt or negatively affect the participants' lives, in line with (Wilson, 2009). In the course of this study, the key ethical considerations included confidentiality, privacy, informed consent, and potential risks and benefits (Essack et al., 2020). As a requirement, an introductory letter was sought and obtained from the Directorate of Graduate Training and Research (DGTR), Kyambogo University to, seek entry into research sites. The researcher obtained ethical clearance from the Gulu University Research Ethics Committee (GUREC) and registered the study with the Uganda National Council for Science and Technology (UNCST).

Before data collection, informed consent was obtained from all participants after they were fully briefed on the purpose, procedures, potential risks, and benefits of the study. Participation was entirely voluntary, and respondents were assured that they could withdraw from the study at any stage without any negative consequences. Confidentiality and anonymity were guaranteed by assigning codes instead of using names and by securely

storing all data to prevent unauthorized access. To further protect participants' rights, the research instruments were reviewed to avoid intrusive or sensitive questions that could cause discomfort. Finally, ethical clearance was sought from the relevant institutional review board and permission was obtained from school authorities in Greater Arua, ensuring that the study complied with professional and institutional standards for responsible research conduct.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents the research findings. The study aimed to explore the relationship between instructional supervision and teacher competence. Specifically, it examined how the various dimensions of instructional supervision are applied in secondary schools in Greater Arua, assessed the current status of teacher competence in these schools, and investigated the relationship between directive supervision and teacher competence. Additionally, the study explored the link between collaborative and non-directive supervision and teacher competence, as well as the relationship between non-directive supervision and teacher competence in the same context.

The findings are organized into four main sections, with the first section focusing on the analysis and interpretation of participants' general information. This is followed by the analysis and interpretation of data on the application of the different dimensions of instructional supervision to teachers according to their demographics. The subsequent section presents the analysis and interpretation of data on the status of teacher competence in secondary schools in Greater Arua. The fourth section presents the analysis and interpretation of data on the testing of the hypotheses.

4.1. Demographic Characteristics of Respondents

In the study, demographic information was collected, which provided a basis for understanding the study's key findings. The demographic information consisted of data on the sex, location, and school status. Finally data on

respondents' teaching experience is presented. The total number of study participants were 269 (100%). The response rates for survey was 41 (89.6%) out of the projected 269 respondents and for the classroom observation was 40 (100%) out of 40 projected. The response rate for interview was 20 (100%) out of the 20 projected. The following tables present distribution of the research respondents in secondary schools in Greater Arua.

School location

Table 4. 1

Distribution of Respondents' Location (Survey)

Respondents' location (Survey)	Frequency	Per cent
Arua City	147	61.0
Arua district	94	39.0
Total	241	100.0

Source: Primary data, 2023

Table 4.1 indicates that 241 participants completed the questionnaires. Of these, the majority (61%) were from Arua City, while 39% came from Arua District. This distribution reflects a balanced representation of teachers. However, the implication is that there are more schools in Arua city compared to the district. The government should plan to build more schools in Arua district.

On the other hand, data were collected through classroom observation, as represented in the table below.

Table 4. 2
Respondents' Location (Classroom Observation)

Respondents' location (Classroom observation)	Frequency	Percent
Greater Arua city	20	50.0
Greater Arua	20	50.0
Total	40	100.0

Source: Primary data, 2023

From Table 4.2, a total of 40 lessons were observed from secondary schools in Arua city and Arua district, out of which 20 (50%) are from Arua city while 20 (50%) are from Arua district.

Table 4. 3
Respondents' School Type (Survey)

School Type	Frequency	Per cent
Government aided school	170	70.5
Private school	71	29.5
Total	241	100.0

Source: Primary data, 2023

The data in Table 4.3 reveal that 170 (70.5%) of the teachers who responded to the survey were from government-aided secondary schools, while 71 (29.5%) were from private secondary schools in Greater Arua. This reveals a fair distribution of teachers in both government and private schools. However, a majority are from government-aided secondary schools. This implies that private schools do not attract more teachers.

On the other hand, through classroom observation, data were also collected from male and female teachers in government and private secondary schools, as shown below.

Table 4. 4
Participants' School Type (Classroom Observation)

School type (Classroom observation)	Frequency	Per cent
Government aided	24	60.0
Privately owned	16	40.0
Total	40	100.0

Source: Primary data, 2023

Table 4.4 shows that 24 (60%) of the lessons observed were for teachers from government-aided secondary schools in Greater Arua, while 16 (40%) of the lessons were for teachers from private secondary schools in Greater Arua.

The study also established the number of respondents by sex for both survey, interview and classroom observation, as presented below.

Table 4. 5
Demographics Information on the Gender of Survey Respondents (Teachers)

	Frequency	Per cent	Valid Percent	Cumulative Percent
Male	162	67.2	67.2	67.2
Female	79	32.8	32.8	100.0
Total	241	100.0	100.0	

Source: Primary data, 2023

The results shown in Table 4.5 reveal that 162 (67.2%) of the teachers who responded to the survey were male, while 79 (32.8%) were female. This shows a fair representation, although a majority were male respondents. This implies that a majority of respondents in the study were males. Females should be encouraged and given opportunities in teacher training institutions. Similarly, data were collected from both male and female head teachers and deputy head teachers using interviews, as shown in the table below.

Table 4. 6
Demographics Information on the Gender of Interview Participants

	Head teachers	Deputy head teachers (Academics)	Total
Male	6 (60%)	8 (80%)	14
Female	4 (40%)	2 (20%)	6
Total	10 (100%)	10 (100%)	20

Source: Primary data, 2023

From the above table, 4.6 (60%) male head teachers and 8 (80%) deputy head teachers attended key informant interviews. On the other hand, 4 (40%) female head teachers and 2 (20%) deputy head teachers attended the interview. Although there is a fair representation of male and female participants, few female head teachers and deputy head teachers are represented, compared to their male counterparts in Arua City and Arua district. This implies that few females are in leadership positions. Females should be encouraged and given opportunities to take up leadership positions. To corroborate data collected from the survey and interviews, lessons were observed for four teachers in both government and private secondary schools in Arau City and Arua district, as represented below.

Table 4.7
Demographics Information on the Gender of Classroom Observation Participants (Teachers)

	Frequency	Per cent	Valid Percent	Cumulative Percent
Male	22	55.0	55.0	55.0
Female	18	45.0	45.0	100.0
Total	40	100.0	100.0	

Source: Primary data, 2023

Table 4.7 above reveals that a total of 40 lessons were observed, with 22 (55%) of male teachers' lessons observed while 18 (45%) of female teachers' lessons observed. This shows a relatively well-distributed number of male and female teachers supervised in class while teaching.

The table below shows the years of experience of teachers who responded and returned the questionnaires.

Table 4. 8
Teacher's Years of Teaching Experience- Survey

	Frequency	Per cent	Valid %	Cumulative %
Novice (0-5 years)	88	36.5	36.5	36.5
Average (6-10 years)	78	32.4	32.4	68.9
Expert teachers(Above ten years)	75	31.1	31.1	100.0
Total	241	100.0	100.0	

Source: Primary data, 2023

Table 4.8 shows that most novice teachers (36.5%) had between 0 and 5 years of teaching experience. Additionally, 78 teachers (32.3%) were classified as intermediate, with 6–10 years of experience, while 75 teachers (31.1%) were considered expert, having more than ten years of service. This shows a fair distribution of expert, average and novice teachers who responded to the questionnaire. The implication is that there are a large population of young and energetic teachers in secondary schools in Arua. Head teachers should energise and tap the potential in these young teachers for improved performance.

Table 4. 9
Teacher's Years of Teaching Experience- Classroom Observation

	Frequency	Per cent	Valid Percent	Cumulative Percent
Expert teachers(Above ten years)	14	35.0	35.0	35.0
Average (6-10 years)	8	20.0	20.0	55.0
Novice (0-5 years)	18	45.0	45.0	100.0
Total	40	100.0	100.0	

Source: Primary data, 2023

Table 4.9 above shows that 18 (45%) of the teachers whose lessons were observed were novice teachers of 0-5 years of teaching, 8 (20%) were average teachers with 6-10 years of experience, while 14 (30%) were expert teachers above 10 years of teaching. The results show a representative sample

of teachers with various teaching experiences. This implies that there are a large population of young and energetic teachers in secondary schools in Arua. School authorities should energise and use these young teachers as the source of modern approaches to teaching.

4.2 Objective One: Application of the dimensions of Instructional Supervision in Secondary Schools in Greater Arua, Uganda

The first objective of the study was to examine how different dimensions of instructional supervision such as directive, collaborative, and non-directive were applied in secondary schools in Greater Arua, Uganda. Findings for each dimension are presented in the subsections that follow. Data were collected from teachers using questionnaires designed to assess the implementation of these supervisory approaches. Results from both surveys and interviews indicated that school-based supervisors in Greater Arua employ all three forms of instructional supervision. The dimensions were measured using five quantitative items, with respondents rating themselves on a four-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = agree, to 4 = strongly agree.

4.2.1 Application of directive supervision in secondary schools in Greater Arua, Uganda

In this section, findings on the application of directive supervision is presented, analysed and interpreted. The first section presents descriptive statistics from survey and the second section presents qualitative findings from interviews with the head teachers and deputy head teacher from secondary schools in greater Arua. Directive supervision was assessed using five closed-ended items. Respondents rated themselves on a four-point Likert

scale, with 1 indicating strongly disagree and 4 indicating strongly agree. The descriptive results are presented in Table 4.10,

Table 4. 10

Descriptive Results on Directive Supervision

Indicators of Directive Supervision	SD	D	A	SA	$\bar{x}$	Std. Dev
My supervisor gives me recommendations for enhancing my teaching, and I make sure to implement them.	10 4.1%	13 5.4%	129 53.5%	89 36.9%	3.23	0.733
My supervisor ultimately decides what aspects need to be improved during our discussions.	16 6.6%	42 17.4%	119 49.4%	64 26.6%	2.958	0.840
My supervisor provides solutions to help me address instructional challenges.	25 10.4%	67 27.8%	100 41.5%	49 20.3%	2.717	0.905
My supervisor directs me on the actions I should take to enhance my teaching	16 6.6%	48 19.9%	135 56%	42 17.4%	2.842	0.785
The approach is typically used for beginner teachers as well as for those in need of improvement assistance	12 5%	30 12.4%	113 46.9%	86 35.7%	3.132	0.815
Aggregate Mean and SD					2.976	0.816

Source: Primary data, 2023

Table 4.10 indicates that the overall application of directive supervision is moderate, with a mean score of 2.976 and a standard deviation (SD) of 0.816. The findings show that the majority of respondents (90.4%) agreed that their supervisors ensure they follow suggestions aimed at improving teaching, while 9.5% disagreed. The mean score of 3.232 corresponded to code 3 (agree) on the Likert scale, suggesting general agreement that teachers adhere to their supervisors' suggestions. The low SD of 0.733 reflected a high level of consistency in respondents' views.

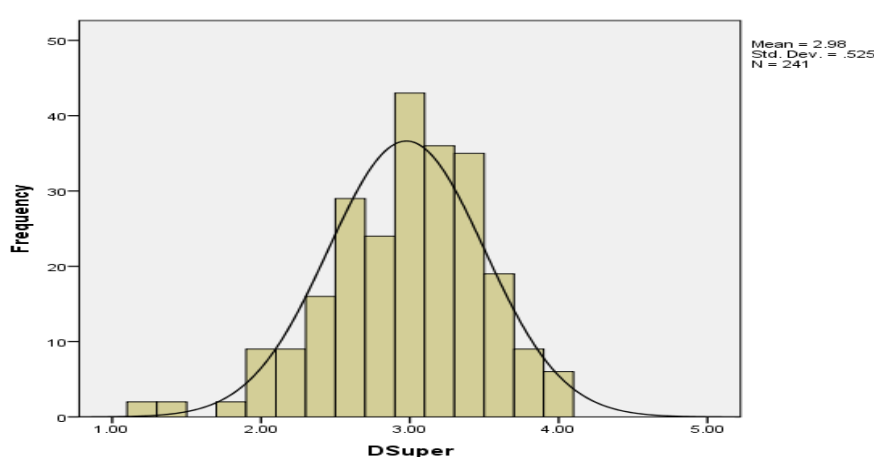
Similarly, most participants (76%) agreed that their supervisors make the final decision on areas that need improvement during discussions, compared to 24% who disagreed. The mean score of 2.958 was close to code

3 (agree), supporting this finding, while the SD of 0.840 indicated that responses were relatively consistent.

On whether supervisors provided solutions to instructional problems, 61.8% of respondents agreed, while 38.2% disagreed. The mean score of 2.717, which was near code 3 (agree), suggested moderate agreement, and the SD of 0.905 showed limited variation in responses.

A majority (73.4%) also agreed that supervisors specify what teachers should do to improve their teaching, while 29.5% disagreed. The mean score of 2.842 matched code 3 (agree), again showing agreement. Furthermore, 82.6% of respondents indicated that directive supervision is particularly applied to novice teachers and those seeking assistance, while 17.4% disagreed. The mean of 3.132 was consistent with code 3 on the Likert scale.

Taken together, the overall average mean suggests that directive supervision is applied at a moderate level across secondary schools in Greater Arua. These findings are further illustrated through a histogram and curve in Figure 4.1.



Source: Primary data, 2023
 Figure 4.1
 Histogram and Curve Showing the Distribution of Respondents on Directive Supervision

The histogram and curve in Figure 4.1 reveal that the majority of respondents clustered on the right side of the distribution, indicating agreement that directive supervision is practiced in secondary schools within Greater Arua.

Similarly, interviews were conducted with the school-based supervisors, which included the head teachers and deputy head teachers in charge of academic affairs, to explore how directive supervision is applied. Participants were given codes in order to hide their identities. The use of codes helped to de-identify participants mentioned in the data collected. Headteachers (HT) were coded from 01 to 10 (HT01 to HT10), with HTM representing the male head teacher and HTF representing the female head teacher. On the other hand, deputy head teachers (DEP) were coded from 01 to 10 (DEP01 to DEP10), with DEPM to represent male deputy head teacher and DEPF to represent female deputy head teacher. The following table represents the coding.

Table 4. 11
Coding of Interview Participants

S/NO	Headteachers	Deputy head teachers
01	HTM01	DEPF01
02	HTF02	DEPM02
03	HTM03	DEPF03
04	HTM04	DEPM04
05	HTM05	DEPM05
06	HTF06	DEPM06
07	HTF07	DEPM07
08	HTF08	DEPM08
09	HTM09	DEPM09
10	HTM10	DEPM10

Source: Primary data, 2023

The critical question that guided this objective was: *“How do you apply the different dimensions of instructional supervision?”*

Interviews conducted with the school-based supervisors, which included the head teachers and deputy head teachers in charge of academic affairs, showed that directive supervision is applied in secondary schools in Greater Arua, Uganda. The key aspects of directive supervision that came up during interviews were standardising the tasks for teacher, evaluating the teacher’s work through close monitoring, making decision for teachers and directing the teachers on what they should do.

In support of the above, HTM04 who was a male head teacher from Arua city reported:

“As for me, I direct the teacher what to do. Because when you tell them what to do then they will not make the same mistake. I have tried this method and it works very well especially with new teachers.”

DEPM02 who was a male deputy head teacher supported the above method when he said “With supervision you need to be tough with teachers. You need to ensure they follow your advice. You need to follow them all the time to ensure that they are doing the right thing.” HTM09 who was a male head teacher added:

Supervision needs when you are not soft because some of these teachers tend to pretend that they are doing the right thing and yet they are not. You need to sit in their classes and after the lesson, you need to tell them where they went wrong during the lesson. Do not allow them to deceive you. Sometimes you need to dictate on what they should do. Give them the timeline and follow them to ensure they correct their mistakes.

However, DEPF01 who was a female deputy head teacher disagreed with the above submission when she said:

As a supervisor, you need to be flexible when supervising these teachers. I need to hear from you. I ask you to give me your experience of the lesson, and then we discuss it as colleagues. But sometimes, I must also dictate to the teacher.

Similarly, HTM03, a male head teacher stated that:

For some of these teachers, you need to tell them what to do. If you don't, then they will not teach well. Whether Expert teachers or new teachers, you still need to tell them how to handle learners in class. That is how I handle my teachers.

The above expressions suggest that supervisors who believe that a teacher has low competence apply directive supervision in order to strengthen their knowledge and skills in teaching. For novice and struggling teachers, the supervisors acknowledged they need to apply directive supervision.

The feedback depends on the experience which you had with the teacher in the class. The tone with the younger teacher, a newly qualified teacher, seeks to guide him or her on what to do to improve aspects of teaching. You need to encourage him/her. She explained (HTM03, 10 March 2023).

Another deputy headteacher had this to say:

For newly qualified teachers, we encourage them to improve teaching by making suggestions on how they can do better. We give them alternative solutions to ways of improving their teaching and learning process. You need to support them grow in the profession. Otherwise they may not be motivated to continue with the profession (DEPM06, 15 March 2023).

Likewise, a participant emphasised that newly qualified teachers need clearly defined goals and expectations.

As a supervisor, I always dictate to these new teachers the goals to accomplish. If it is syllabus coverage, I tell them that by the end of the term, this content must be covered. Don't leave them on their own. Otherwise, your expectations will not be met (HTM09, 20 March 2023).

Close monitoring and follow-up were some of the aspects of directive supervision that were featured during interviews and expressed by most key

informants. One deputy head teacher emphasised that he closely monitored teachers to ensure they accomplished the set target.

I do a lot of monitoring to ensure that teachers work hard. You see, when you don't oversee how they teach, you may not realise their weaknesses. So for me I move to their classes to check how they are teaching. I also use class prefects to record the teacher's lesson attendance (DEPM04, 13 March 2023).

Similarly, one of the participants commented, "I supervised teachers differently. For new teachers and those who are lagging, I strictly follow up to ensure that they accomplish the set plan" (DEPM08, 17 March 2023).

The above expressions suggest that most supervisors in Greater Arua believe that directive supervision is key in enhancing teachers' knowledge and skills, which results in effective role performance and a high level of productivity. The findings support the quantitative results, which revealed that directive supervision was applied in secondary schools in Greater Arua, though at a moderate level. This aligns with the directive supervision approach within instructional leadership theory, where a leader makes most of the decisions and makes explicit directions to teachers. Subsequently, these categories of employees require close monitoring and follow-up using a directive supervisory approach. This implies that school-based supervisors should strengthen the appropriate use of directive supervision to enhance teacher competence.

4.2.2 Application of collaborative supervision in secondary schools in Greater Arua, Uganda

In this section, findings on the application of collaborative supervision are presented, analysed and interpreted. The first section provides descriptive statistics from the survey, while the second section presents qualitative

insights obtained through interviews with head teachers and deputy head teachers from secondary schools in Greater Arua. Collaborative supervision was examined using five closed-ended items, where respondents rated themselves on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The descriptive results are summarized in Table 4.11.

Table 4.12
Descriptive Results on Collaborative Supervision Behaviour

Indicators of collaborative supervision	SD	D	A	SA	$\bar{x}$	Std. Dev
My supervisor considers and acknowledges the suggestions I provide for improvement	62 25.7%	134 55.6%	38 15.8%	7 2.9%	1.958	0.729
My supervisor allows me to express disagreement during discussions	69 28.6%	119 49.4%	47 19.5%	6 2.5%	1.958	0.762
My supervisor collaborates with me in selecting the most appropriate teaching strategies	71 29.5%	129 53.5%	26 10.8%	15 6.2%	1.937	0.806
My supervisor partners with me to tackle problems encountered during classroom instruction	17 7.1%	76 31.5%	97 40.2%	51 21.1%	2.917	0.732
The method is applied to teachers of moderate experience who recommend solutions for improving classroom instruction	10 4.1%	20 8.3%	148 61.4%	63 26.1%	3.095	0.709
Aggregate Mean and SD					2.373	0.75

Source: Primary data, 2023

Table 4.12 indicates that the overall application of collaborative supervision is low, with a mean of 2.373 and a standard deviation (SD) of 0.75. Notably, 81.3% of respondents disagreed that their supervisor listens to and accepts their suggestions for improvement, while only 18.7% agreed. This suggests that supervisors often do not consider supervisees' concerns, which may hinder professional growth. The mean score of 1.958 corresponds closely to code 2 (disagree) on the Likert scale.

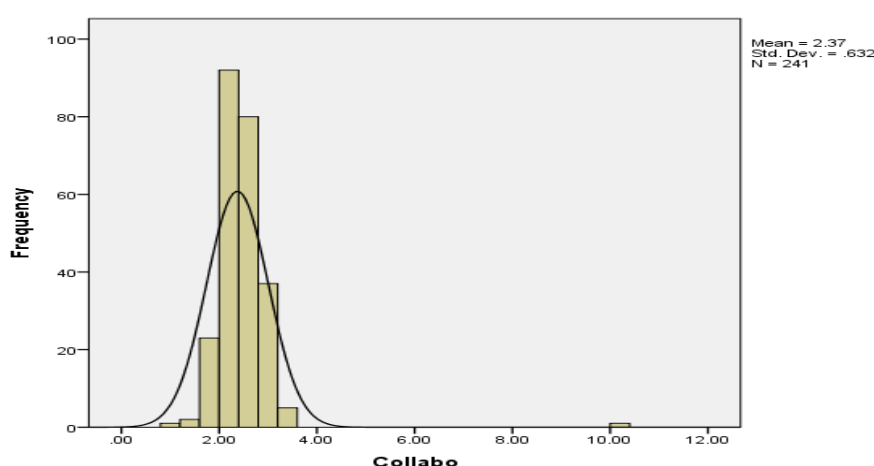
Additionally, 78% of respondents disagreed that their supervisor accepts disagreement during discussions, compared to 22% who agreed. This implies that school-based supervisors generally do not welcome alternative viewpoints from their supervisees. This denotes that whatever the supervisors say must be accepted by the supervisees, without questioning. This may affect supervisor-supervisee relation and teacher job motivation.

The results showed that 83% of respondents disagreed that their supervisors share decision-making responsibilities with them in selecting the best teaching practices, while only 17% agreed. This indicates that supervisors are generally unwilling to involve teachers in decisions regarding instructional methods. The mean score of 1.937 aligns closely with code 2 (disagree) on the Likert scale, confirming this trend.

Conversely, 61.3% of respondents agreed that their supervisors collaborate with them as colleagues to address classroom teaching challenges, compared to 38.6% who disagreed. This suggests that supervisors do engage in collegial support to some extent. Furthermore, 87.5% of respondents agreed that collaborative supervision should be applied to teachers who propose solutions for improving classroom instruction, while 12.4%

disagreed, implying that this approach is recognized as useful in problem-solving.

Overall, the percentages and mean scores indicate that collaborative supervision is only partially applied in secondary schools in Greater Arua. The highest mean (3.095) was associated with the item on applying this approach to teachers suggesting solutions, whereas the lowest mean (1.937) reflected disagreement on supervisors sharing decision-making. Low standard deviations across all items indicate that respondents' opinions were largely consistent. To provide a comprehensive view of collaborative supervision, all items in Table 4.3 were combined into a single index, Csupervision, as illustrated in Figure 4.2.



Source: Primary data, 2023

Figure 4.2
Histogram and Curve Showing the Distribution of Respondents on Collaborative Supervision

The histogram and curve in Figure 4.2 indicate that most respondents' opinions clustered on the left side, suggesting that collaborative supervision is infrequently practiced in secondary schools in Greater Arua. This finding highlights the need for head teachers to strengthen the use of collaborative supervision in these schools.

Interviews with school-based supervisors, including head teachers and deputy head teachers, confirmed that collaborative supervision is applied, particularly with average-performing teachers. In these cases, supervisors involve teachers in the decision-making process. One head teacher explained: ‘You try to propose possible measures to help the teacher improve and also ask how they would evaluate themselves and identify ways to enhance their performance next time’the decision-making process with the supervisees.” One head teacher had this to say:

You try to come up with some possible measures to help him become a better person in order to improve next time. You also inquired from him how he could evaluate himself if he was the one to evaluate, and how he can improve (HTM07, 17 March 2023).

Moreover, one participant acknowledged sharing the decision-making tasks with some teachers.

When I am supervising teachers, I take into consideration their teaching experience. For those who have some knowledge and skills in teaching, I engage in dialogue in order to find the best solution to instructional challenges. I give feedback but I also respect their viewpoint (DEPM10, 21 March 2023).

Another head teacher added.

According to me, the best way to support teachers is through engaging in open communication. When I am in the conference with the supervisee, I ask them to first share their perspective. And my work is to improve the suggestions. This encourages creativity in teaching (DEPM06, 15 March 2023).

One deputy head teacher supported the above view: “Respect is very important during supervision. You need to consider and value the teacher’s contributions. So, I work with teachers as colleagues” (HTM10, 21 March 2023). This view was supported by a participant who emphasised:

I value and respect the contributions of my supervisees because when you respect them, you create a level ground for teachers, you motivate

them to be innovative. So working as a colleague is very important. When you give them the platform to decide, they learn new ways of teaching (DEPM10, 21 March 2023).

Another participant concurred with the colleague as she expressed: “During supervision, I take on a supportive and facilitative role. In order to improve teaching, I support their suggestions. All in all, I give more opportunities to the supervisee” (DEPF 08, 17 March 2023).

Another participant concluded that this kind of approach best suits teachers who are at an average competence level. “I apply this approach to teachers who are able to suggest solutions to improve their classroom teaching. Here, I listen keenly to a teacher before I provide my own judgment” (HTF08, 17 March 2023).

The above expressions suggest that supervisors apply the collaborative supervisory approach to teachers who want to work jointly with their supervisor to mitigate instructional challenges, as well as teachers who regard their supervisors as resources to rely on for professional growth.

4.2.3 Application of non-directive Supervision in secondary schools in Greater Arua, Uganda

In this section, findings on the application of non-directive supervision is presented, analysed and interpreted. The first section provides descriptive statistics from the survey, while the second section presents qualitative findings from interviews with head teachers and deputy head teachers from secondary schools in Greater Arua. Non-directive supervision was assessed using five closed-ended items, with respondents rating themselves on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

The results of the self-administered questionnaire are presented in table 4.13 below.

Table 4. 13

Descriptive Results 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 teaching practice	36 14.9%	136 56.4%	50 20.7%	19 7.9%	2.215	0.790
My supervisor lets me explore and choose the most appropriate solutions.	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
Aggregate Mean and SD					2.433	0.787

Source: Primary data, 2023

Table 4.13 shows that the application of non-directive supervision is low at mean of 2.433 and a 0.787 standard deviation (SD), meaning the respondents' views were similar in relation to the application of non-directive supervision. The findings indicate that 71.3% of respondents disagreed that their supervisors allow them to identify the best practices for addressing classroom teaching challenges, while 12.4% held a different view. The mean score of 2.215, close to code 2 (disagree) on the Likert scale, supports this observation, suggesting that supervisors generally do not permit teachers to determine optimal instructional strategies.

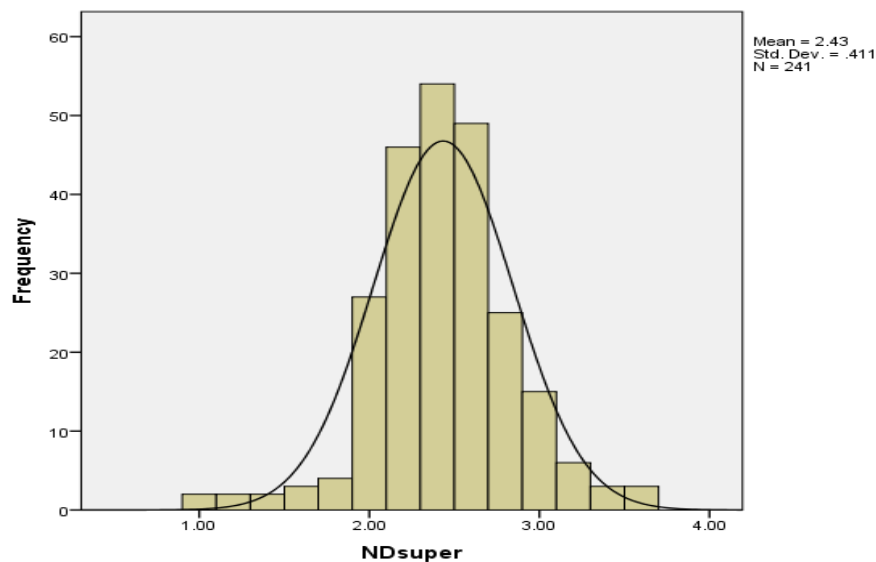
Similarly, 80.5% of respondents disagreed that their supervisors enable them to explore multiple alternatives and select the most suitable plan, compared to 19.5% who agreed. The mean of 1.949, nearly equal to code 2

(disagree), reinforces this finding, indicating limited autonomy for teachers in decision-making.

On a positive note, 67.2% of respondents agreed that their supervisors encourage creativity and innovation in classroom teaching, while 32.8% disagreed. The mean of 2.892, slightly below code 3 (agree), suggests moderate support for creative and innovative practices. Most respondents (83%) also disagreed that their supervisors back their suggestions for improving classroom instruction, with only 17% agreeing. The mean of 1.987 aligns with code 2 (disagree), confirming that teacher input on instructional improvement is generally not supported.

Finally, 89.2% of respondents agreed that non-directive supervision is applied to teachers capable of solving problems independently, compared to 10.8% who disagreed. The mean score of 3.095, corresponding to code 3 (agree), indicates that this approach is reserved for more autonomous teachers.

Overall, the means and standard deviations indicate that non-directive supervision is not widely practiced among teachers in Greater Arua secondary schools. Standard deviations were low across all items (highest = 0.942, lowest = 0.715), reflecting consistent responses among participants. To provide a summary view, all items in Table 4.4 were combined into a single index, NDSuper (non-directive supervision), as illustrated in Figure 4.3.



Source: Primary data, 2023

Figure 4.3

Respondents' Distribution on Non-Directive Supervision Illustrated by Histogram and Curve

The histogram and curve in Figure 4 show that the majority of respondents clustered on the left side, indicating that non-directive supervision is not widely practiced among teachers in the selected secondary schools in Greater Arua. This suggests a need for head teachers to enhance the implementation of non-directive supervision in these schools.

Interview data further revealed that non-directive supervision is primarily applied to teachers who can independently address instructional challenges. Participants indicated that this approach is used with teachers who are capable of making professional judgments about their teaching and providing solutions with minimal support from supervisors essentially, teachers who have reached a level of autonomy.

Supporting this, one male head teacher (HTM05) explained the flexible nature of this supervision:

As a supervisor, we do not dictate to teachers who can manage their own teaching and learning processes. We provide only minimal guidance to these teachers. You need to give them chance to find the appropriate methods of handling instructional

challenges. When you give them chance, they learn from that. You know there is what we call learning by doing.

Additionally, some of the participants testified that they encouraged creativity in teachers using a non-directive approach. HTM04 who was a head teacher had this to say:

I allowed my teachers to be more creative and innovative by giving them a high level of autonomy. Where they could make decisions on their own. I encouraged them to always try out new ideas in their classrooms. This way they learn to be independently.

Not only that, but also applying a supervisory approach that focuses on the teacher's reflection. In that regard, DEPM01 who was a male deputy head teacher expressed that:

During supervision, I always allow my teachers to find the best practice to solve instructional challenges. I encourage them to reflect on their teaching. This is done during self-evaluation. I don't impose my ideas. Lesson evaluation is very important for all teachers. They need to be encouraged to reflect on their past lesson.

In the same way, one of the school-based supervisors admitted applying non-directive supervision in secondary school in Greater Arua. The following verbatim attest:

During supervision, the teacher needs to get a chance to make decisions on his own. I always allow some of my teachers the opportunity to explore and generate a variety of alternative solutions to instructional problems. From the many ways of dealing with issues affecting his class, I now make him choose the most appropriate solution to implement in the classroom (HTF08, 17 March 2023).

Additionally, some participants acknowledged that they give teachers autonomy to make decisions on the best ways to improve instruction. One of the female deputy head teachers expressed that: "During supervision, I give the teacher a chance to reflect on his/her lesson and choose what works. I don't need to force a teacher. They have to be autonomous." (DEPF02, 09

March 2023). Moreover, another participant concurred with the above expression when he stated that:

When you want teachers to learn and grow in the profession, you do not have to decide for them. Let them decide for themselves. Let's see things from their angle. If you always decide for them, then you are killing their curiosity (HTF08, 17 March 2023).

From the above expressions by school-based supervisors, the findings suggest that they apply non-directive supervisory approaches to enable teachers to gain knowledge and skills in creatively solving problems with a high level of autonomy.

Overall, the findings suggest that school-based supervisors apply three different approaches to supervision, depending on the teacher's competence level. For teachers with low competence levels, directive supervision was applied, collaborative supervision was applied to teachers with moderate competence levels, and non-directive supervision was applied to teachers with high competence levels. The qualitative findings are in line with the quantitative findings, where supervisors and teachers reported that their supervisors applied all three supervisory approaches almost equally but with directive supervision slightly more frequently applied.

Table 4.14

Application of the Dimensions of Developmental Supervision

Application of the Dimensions of Developmental Supervision						
			Teaching_experience1			Total
			Novice (0-5 years)	Average (6-10 years)	Expert teachers(Above 10 years)	
Supervisory approaches	Directive	Count	86	74	71	231
	Collaborativ e	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.

Source: Primary data, 2023

Table 4.14 illustrates that supervisors employed directive, collaborative, and non-directive supervisory approaches. The findings further indicate that most teachers (n = 231) reported that directive supervision was predominantly used. This was followed by non-directive supervision (n = 191), while collaborative supervision was the least applied (n = 177). These results highlight the need for head teachers to enhance the use of both collaborative and non-directive supervisory practices in secondary schools within Greater Arua.

4.3.0 Objective Two: Status of Teacher Competence in Secondary Schools in Greater Arua, Uganda

The second objective of the research aimed to establish the level of teacher competence in secondary schools within Greater Arua, Uganda. To achieve this, quantitative data were gathered through a questionnaire that used a four-point Likert scale: 4 = strongly agree (SA), 3 = agree (A), 2 = disagree (D), and 1 = strongly disagree (SD). Similarly, lesson observation protocol was used to gather information by observing teacher's lessons to determine the level of competence exhibited while teaching. Teachers were rated as Unsatisfactory, Satisfactory, Good or Outstanding for each competence area.

To gain information on the attributes of a competent teacher, interview was conducted with the school supervisors which included the head teachers and deputy head teachers incharge of academic affairs in the schools. Participants were given codes in order to hide their identity. The use of codes helped to de-identify participants mentioned in the data collected. Head teacher (HT) were coded from 01 to 10 (HT01- HT10), with HTM to represent male head teacher and HTF to represent female head teachers. On the other hand, deputy head teachers (DEP) were coded from 01 to 10 (DEP01-DEP10), with DEPM to represent male deputy head teachers and DEPF to represent female deputy head teachers. The following table represents the coding.

Table 4. 15
Codes Showing Demographics of Interview Participants

S/NO	Head teachers	Deputy head teachers
01	HTM01	DEPF01
02	HTF02	DEPM02
03	HTM03	DEPF03
04	HTM04	DEPM04
05	HTM05	DEPM05
06	HTF06	DEPM06
07	HTF07	DEPM07
08	HTF08	DEPM08
09	HTM09	DEPM09
10	HTM10	DEPM10

Source: Primary data, 2023

From the Table 4.15 above, 10 head teachers (M=06; F=04) and 10 deputy head teachers (M=08; F=02) were interviewed to generate data on the status on teacher competence in secondary schools in Greater Arua, Uganda. The data revealed that there are very few females in leadership positions in secondary schools in Greater Arua. Using questionnaire as a tool for data collection, the critical competence areas studied were leadership, professional learning, assessment and technological competence.

4.3.1 Status of Leadership Competence in secondary schools in greater Arua, Uganda

The study examined leadership competence through eight self-rating items presented in a closed-ended format. Responses were captured on a Likert scale with four options: strongly disagree (1), disagree (2), agree (3), and strongly agree (4).

Table 4.16
Descriptive Results on Leadership Competences

Indicators of leadership competence	SD	D	A	SA	$\bar{x}$	Std. Dev
I communicate explicit expectations for student learning	6 2.5%	42 17.4%	152 63.1%	41 17%	2.940	0.665
I organize instructional experiences to help learners understand the purpose of their studies	6 2.5%	43 17.8%	151 62.7%	41 17%	3.062	0.047
I create a supportive classroom atmosphere with well-defined expectations for student behaviour	5 2.1%	28 11.6%	138 57.3%	70 29%	3.253	0.042
I manage teaching-learning resources well to support student learning	5 2.1%	34 14.1%	139 57.7%	63 26.1%	3.078	0.693
I guide students to be responsible for managing their own conduct	6 2.5%	47 19.5%	106 44%	82 34%	3.095	0.792
I praise them for fostering students' self-esteem	14 5.8%	36 14.9%	112 46.5%	79 32.8%	3.062	0.841
I promote student involvement in managing classroom processes	16 6.6%	66 27.4%	100 41.5%	59 24.5%	2.838	0.872
I respond to misconduct by applying positive discipline techniques.	41 17%	68 28.2%	83 34.4%	49 20.3%	2.580	0.997
Aggregate Mean and SD					2.99	0.62

Source: Primary data, 2023

Table 4.16 shows that the status of leadership competence is moderate at mean of 2.99 and a 0.62 standard deviation (SD). Specifically, most of the study respondents (86.3%) agreed that they maintain a conducive classroom environment with clear expectations for standards of behaviour. These were opposed to 13.7% who disagreed. Such findings implied agreement with maintaining a conducive classroom environment that creates clear student learning expectations. This finding was almost similar, with a mean of 2.946, almost equal to code 3 agreement on the Likert scale that was used, hence confirming that there was agreement with this item.

The majority of the study respondents, 83.8%, agreed that they manage teaching-learning resources well to support student learning. This slightly differed from the 16.2% who disagreed. This implies that teaching and learning resources are well managed to support student learning. This was in line with the mean of 3.062, which reflects an “agree” response on the measurement scale. This meant that teachers managed the teaching and learning resources well in a bid to support learning. With a standard deviation of 0.693, there was minimal variation in the views expressed by respondents.

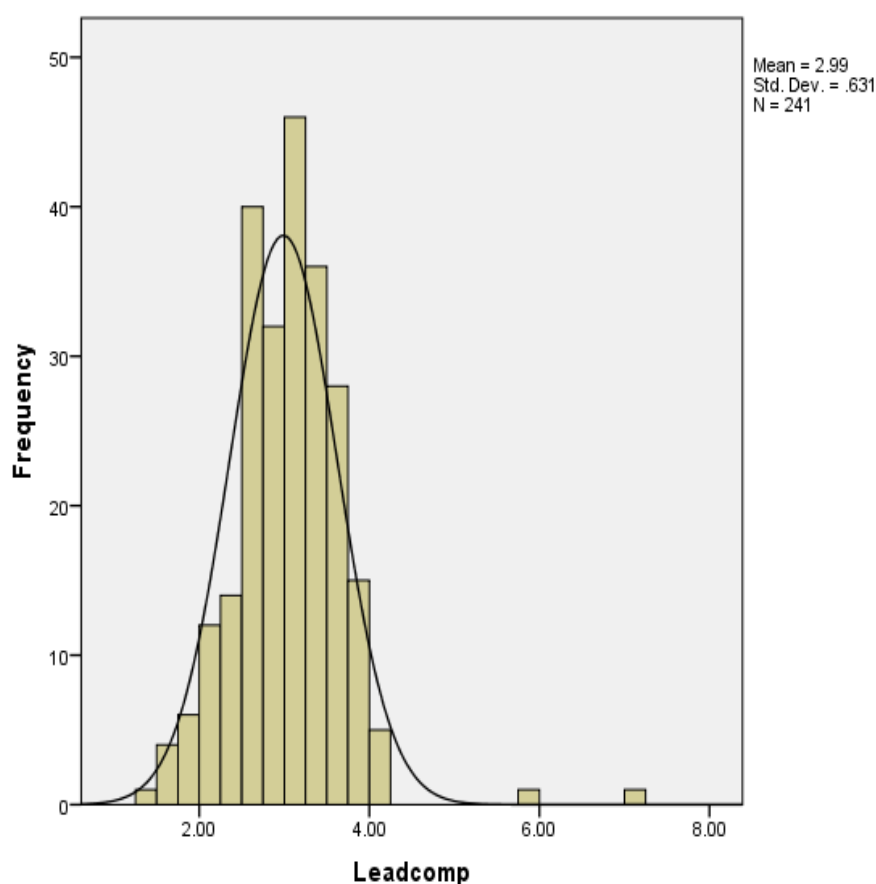
Meanwhile, 78% of the study respondents agreed that they encourage students to assume responsibility for their behaviour. This differed from 22% who disagreed. This implies that teachers in the Greater Arua secondary schools encourage students to assume responsibility for their behaviour. The mean of 3.25 was almost equal to the code 3, which presupposes agreement to support students' assumption of responsibility for their behaviour.

The majority of the study respondents, 81.3%, agreed that they use praise to foster students' self-esteem. This was opposed to 20.7% who

disagreed. This implies that praise is used as a tool to foster students' self-esteem. A mean of 3.060 was almost equal to the code 3 agreement on the scale that was used. Hence, this implies that praising is commonly used by teachers to foster or increase students' self-esteem.

A large number of the study respondents, 66%, agreed that they facilitate student ownership of classroom procedures. This was opposed to 34% who disagreed. This meant that teachers in Greater Arua always facilitated student ownership of classroom procedures. A mean of 2.83 was slightly below the code 3 agreement. Hence, teachers should always facilitate student ownership of classroom procedures in Greater Arua. The low standard deviation (0.872) indicates that respondents' opinions were generally consistent. Additionally, 54.7% of participants agreed that they implement positive management strategies to address inappropriate behavior, compared to 45.2% who disagreed. This suggests that respondents do apply positive techniques in managing classroom misconduct. The mean score of 2.58, which is close to code 3 (agree) on the Likert scale, further supports this conclusion.

Overall, the means and percentages indicate that respondents perceive their leadership competence to be consistent with job expectations. The low standard deviations across all items suggest that there was little variation in opinions among respondents. On average, the findings reveal that teachers expressed that they have a moderate level of leadership competence. Similar findings are provided in Figure 4.4.



Source: Primary data, 2023

Figure 4. 4

Histogram and Curve Illustrating Respondents' Leadership Competence

The histogram and curve in Figure 4.4 reveal that most respondents' scores are concentrated on the right side, with mean of 2.99, suggesting that their leadership competence was moderate.

In order to reinforce survey findings on status of leadership competence, classroom observation was used to collect data by observing four (04) teachers per school. By conducting a cross tabulation, the status of leadership competence was determine, as demonstrated by the expert, average and novice teachers. The findings are hereby presented in the table below. Teachers were rated as Unsatisfactory, Satisfactory, Good or

Outstanding, depending on the level of competence exhibited while teaching.

The competence levels are defined as follows:

Outstanding (4): The teacher has demonstrated a high level of competence. The teacher is a model of excellence in classroom practices; **Good (3):** The teacher demonstrated a fair level of competence. The teacher requires close mentorship to improve on a few aspects of teaching. **Satisfactory (2):** The teacher demonstrated low competence in most aspects of teaching. The teacher needs more directive supervision; **Unsatisfactory (1):** The teacher demonstrated a very low level of competence. The teacher needs coaching on specific teaching areas by the supervisor or senior colleagues.

Data collected from classroom observation revealed that teachers exhibited varying levels of leadership competence as presented in the following section.

Table 4. 17
Cross Tabulation for Leadership Competence against Teaching Experience

Leadership competence	Cases											
	Unsatisfactory			Satisfactory			Good			Outstanding		
	Expert teachers	Average	Novice	Expert teachers	Average	Novice	Expert teachers	Average	Novice	Expert teachers	Average	Novice
Communicate explicit expectations for student learning	0 0%	1 2.5%	0 0%	3 7.5%	2 5%	3 7.5%	3 7.5%	5 12.5%	2 5%	6 15%	2 5%	13 32.5%
Structure learning experiences to ensure students have a sense of purpose	0 0%	0 0%	0 0%	2 5%	0 0%	1 2.5%	4 10%	8 20%	3 7.5%	8 20%	0 0%	14 35%
Maintain a conducive classroom environment	4 10%	1 2.5%	5 2.5%	2 5%	3 7.5%	3 7.5%	3 7.5%	3 7.5%	2 5%	5 12.5%	1 2.5%	8 20%
Manage well teaching-learning resources to support student learning	4 10%	0 0%	3 7.5%	2 5%	3 7.5%	4 10%	3 7.5%	3 7.5%	2 5%	5 12.5%	2 5%	9 22.5%
Encourage students to assume responsibility for their behaviour	3 7.5%	2 5%	4 10%	7 17.5%	5 12.5%	6 15%	2 5%	1 2.5%	5 12.5%	2 5%	0 0%	3 7.5%
Use praise to foster students' self-esteem	0 0%	3 7.5%	2 5%	11 27.5%	2 5%	14 35%	3 7.5%	3 7.5%	2 5%	0 0%	0 0%	0 0%
Facilitate student ownership of classroom procedures	2 5%	1 2.5%	6 15%	8 20%	5 12.5%	10 25%	4 10%	2 5%	2 5%	0 0%	0 0%	0 0%
Apply positive management techniques to respond to inappropriate behaviour	2 5%	2 5%	11 27.5%	11 27.5%	6 15%	6 15%	1 2.5%	0 0%	0 0%	0 0%	0 0%	1 2.5%

Source: Primary data, 2023

From Table 4.17, the cross-tabulation for Leadership competence against teaching experience, data show that 47.5% (15% expert; 0% average, 32.5% novice) teachers outstandingly exhibited competence in communicating explicit expectations for student learning. However, 2.5% (0% expert; 2.5% average; 0% novice) teachers demonstrated low level of competence, at the level of unsatisfactory. Data also show that 60% (20% expert; 5% average; 35% novice) teachers demonstrated outstanding competence level in structuring learning experiences to ensure students have a sense of purpose. This is against 0% of the teachers rated unsatisfactory in structuring learning experiences to ensure students have a sense of purpose. In maintaining conducive classroom environment, 35% (12.5% expert; 2.5% average 20%; 35% novice) of the teachers rated outstanding. However, 25% (10% expert; 2.5% average; 12.5%) of teachers were rated unsatisfactory in maintaining conducive classroom environment respectively. Similarly, 40% (12.5% expert; 5% average; 22.5% novice) teachers achieved outstandingly at managing teaching-learning resources to support student learning. This against the 17.5% (10% expert; 0% average; 7.5% novice) teachers who were rated unsatisfactory in managing teaching-learning resources to support student learning.

Differing from the above results, 45% (17.5% expert; 12.5% average; 15% novice) teachers were rated with only a satisfactory level of leadership competence in encouraging students to assume responsibility for their behaviour. This is against only 12.5% (5% expert; 0% average; 7.5% novice) teachers rated at the outstanding level in encouraging students to assume responsibility for their behaviour. Similarly, 67.6% (27.5% expert; 5%

average; 35% novice) teachers were rated at a satisfactory level in the use of praise to foster students' self-esteem, against 0% of the teachers rated at an outstanding level in the use of praise to foster students' self-esteem. In facilitating student ownership of classroom procedures, 57.5% (20% expert; 12.5% average; 25% novice) of the teachers observed were rated at a satisfactory level in facilitating student ownership of classroom procedures, against 0% at an outstanding level. Finally, during classroom observation, the researchers rated 57.5% (27.5% expert; 15% average; 15% novice) of the teachers were rated at only satisfactory level in the teachers' skills in applying positive management techniques to respond to inappropriate behaviour during the lesson. This is against 2.5% (0% expert; 0% average; 2.5% novice) of observed teachers rated at the outstanding level. This implies that teachers in secondary schools in Greater Arua exhibit a low level of knowledge and skills in the use of praises to build student self-esteem and managing student inappropriate behaviour, with the Expert teachers scoring low in those competence areas compared to the average and novice teachers. This therefore calls for more continuous professional development activities to enhance their competence.

To corroborate the quantitative findings, interviews were conducted with school-based supervisors, including head teachers and deputy head teachers in charge of Academic Affairs in order to examine the level of competence possessed by secondary school teachers in Greater Arua. Research participants interviewed agreed that every teacher should have Leadership, Professional Learning, Assessment and Technological

competence. However, the degree to which teachers exhibited this competence varies from teacher to teacher and from context to context.

Under Leadership competence, the school-based supervisors agreed that most of the teachers possess leadership skills in terms of organising learning environments. The key set of knowledge, skills and values that constitute effective leadership of instruction is key to improved teacher performance and student learning outcomes. As reflected in the following verbatim quotes, most research participants acknowledged that a competent teacher should be able to organise and control his/her class, possess the ability to deal with learner disruptive behaviour and have knowledge of learner characteristics.

Classroom organisation and management is key to effective teaching and learning; thus, a competent teacher should have the skills of organising the learning environment and controlling his/her learners, as reported by one of the head teachers.

A competent teacher should have the skill of classroom management and checking learner's behaviour. He should have control over the learners and have effective class control. Classroom management starts from how you organise the seating arrangement and putting in place class rules (HTF08, 17 March 2023).

When asked, one other head teacher from Greater Arua confirmed that knowledge of students' characteristics and the skill of handling students' discipline are pertinent competences that their teachers possess.

Teachers here are good at controlling discipline. Our teachers know about student characteristics and how they do their things, and knowledge about how to deal with the student's behaviour is a very important competence that they possess. As a teacher, you need to know that you teach students from different backgrounds, and so you need to be conscious of their behaviour. For example, in Arua, there

are students from Congo, Sudan, and many other places (HTM09, 20 March 2023).

Another head teacher added that their teachers are competent because they are gender responsive. “.... he makes the classroom inclusive. Where both genders are involved. And then also gives attention to the individual learner. They are concerned about individual interest and needs” (HTM10, 21 March 2023).

On classroom organisation and management as a dimension of leadership competence, a deputy head teacher from Arua city had this to say:

First of all, I want to say that these teachers are good at classroom arrangement or the setup of the class. These teachers control the class while teaching. Some teachers also have good communication skills, except a few who still use harsh language while teaching. (DEPM10, 21 March 2023).

From the above quotes it can be deduced that classroom organisation and management, discipline management, inclusivity and communication skills are key attributes demonstrated by secondary school teachers in Greater Arua, Uganda.

4.3.2 Status of Professional Learning Competence in secondary schools in Greater Arua, Uganda

Professional learning competence was studied using eight quantitative items. The four Likert scales used were: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD). Results are provided in Table 4.16.

Table 4.18
Descriptive Results on Professional Learning Competence

Items on professional learning competence	SD	D	A	SA	$\bar{x}$	Std. Dev
I regularly reflect on a wide range of actions for ongoing professional growth	20 8.3%	54 22.4%	124 51.5%	43 17.8%	2.788	0.832
I seek feedback from different sources to enable quick reflection and timely action	13 5.4%	64 26.6%	122 50.6%	42 17.4%	2.800	0.786
I set targets to guide my professional growth	26 10.8 %	73 30.3%	82 34%	60 24.7%	2.850	0.670
I hold discussions with colleagues about professional matters	8 3.3%	43 17.8%	110 45.8%	80 33.2%	3.087	0.798
I use classroom observation data as the source of ongoing development	42 17.4 %	54 22.4%	97 40.2%	48 19.9%	2.625	0.992
I collaborate with professionals to generate new ideas	11 4.6%	40 16.6%	132 54.8%	58 24.1%	2.983	0.769
I take part in suggested programs that enhance my professional growth	11 4.6%	33 13.7%	142 58.9%	55 22.8%	3.000	0.741
I utilize research-based techniques to promote effective teaching and learning	92 38.2 %	79 32.8%	49 20.3%	21 8.7%	1.995	0.968
Aggregate Mean and SD					2.77	0.82

Source: Primary data, 2023

Table 4.18 shows that the status of professional learning competence is moderate at a mean of 2.77 and a 0.82 standard deviation (SD). Specifically, most of the study respondents, 69.3%, agreed that they regularly reflect on a wide range of actions for ongoing professional growth. This differed from 30.7% who disagreed. Such findings suggest that teachers in Greater Arua reflect on a wide range of actions for ongoing professional growth. A mean of 2.788 was slightly below code 3 “agree” on the scale that was used. This, hence, implies that teachers rely on ongoing professional growth to achieve competency.

The study revealed that 68% of respondents agreed that they receive feedback from multiple sources, which enables timely reflection and action, while 32% disagreed. With a mean score of 2.800, closely aligning with the code 3 (agreement) on the Likert scale. This indicates that teachers generally access feedback from different sources to guide their reflection and action. In addition, 58.9% of respondents agreed that they set goals for their professional development. This is opposed to 41.1% who disagreed. The mean 2.850 suggests that respondents establish goals for their professional development.

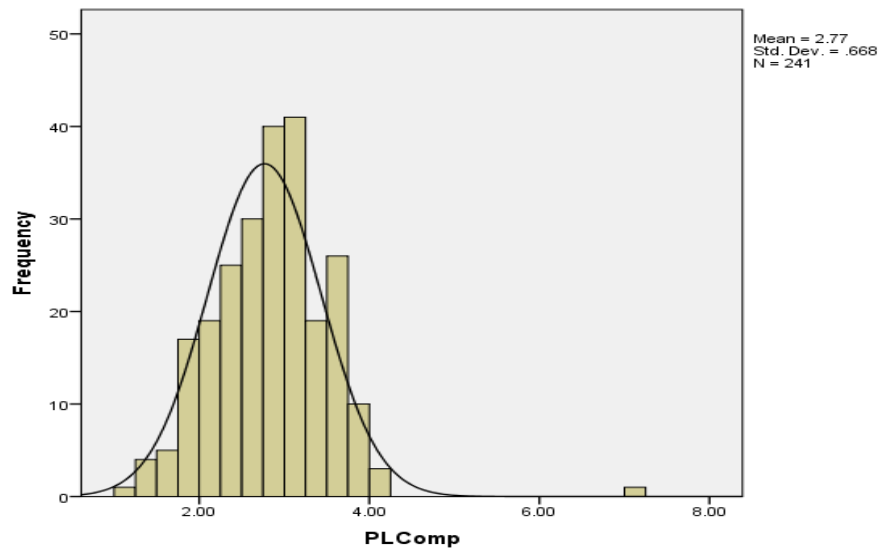
On the importance of data from classroom observation, the study respondents, 60.1%, agreed that they use classroom observation data as a source of ongoing professional development. This differed from 39.8% who disagreed. This implies that teachers in the study rely on classroom data to decide their professional development engagements. Such findings were almost in line with the mean of 2.626, which is nearly equal to code 3, which is “agree” with the Likert scale used, thus agreeing with the use of observation data for ongoing professional development. According to the results, 78.8% agreed that they engage in dialogue with colleagues in relation to professional issues. This was different from the 21.1% who disagreed with this item. The mean 3.087 was equal to code 3, which is “agree” on the scale that was used; hence, it agrees with consulting and engaging in dialogue with fellow employees on professional matters arising.

On collaboration as a strategy for professional learning, results show that 78.9% of the study respondents agreed that they collaborate with other professionals to generate new ideas. This was opposed to 21.2% who

disagreed. These findings suggested that teachers in the Greater Arua secondary schools collaborate with other professionals to generate new ideas. This was in line with the mean 2.983, which is almost equal to the code 3 agreement. This suggested that they had agreed that they collaborate with others to work better. The standard deviation of 0.760 was low, implying that respondents' views did not vary from one another.

Most of the study respondents, 71.7%, agreed that they participate in recommended activities for professional learning and development. This differed from 18.3% who disagreed. This suggested that teachers in the Greater Arua participate in recommended professional learning activities. Hence, this shows that teachers engage in professional learning activities that empower them with job skills. Lastly, 71% of the study respondents disagreed that they apply various research-verified approaches to improve teaching and learning. This was opposed to 29% who agreed. This, hence, implied that respondents/ teachers had decided that various research-verified approaches could be used to improve teaching and learning. However, the mean was 1.995, suggesting that they had disagreed with the use of research verified to improve teaching and learning. This implies that most teachers do not engage in research to improve their practices.

Overall, the mean of 2.77 on all these items suggested that professional learning competence was moderately exhibited by teachers in the Greater Arua. Summary results are offered in Figure 4.5:



Source: Primary data, 2023

Figure 4.5

Histogram and Curve Showing the Distribution of Respondents on Professional Learning Competence

The figure shows that most of the respondents concentrated on the left side of the histogram and curve, indicating a moderate agreement with the status of their professional learning competence. This implies that head teachers should devise strategies to strengthen the professional competence of teachers in secondary schools in Greater Arua, Uganda.

Qualitative data were collected through interviews to ascertain whether teachers in secondary schools in Greater Arua exhibited professional learning competence. Teachers are key to determining the quality of education and student learning outcomes through collaborations and networking with colleagues in a community of practice. During interviews with secondary school head teachers in Greater Arua, participants agreed that teachers are able to achieve results through working and learning from one another.

From the findings, the school-based supervisors acknowledged that teachers collaborated with their colleagues, as depicted in the quote. “Here

our teachers can work together with others, coordinated by the head of department, and as they work together, they also learn from one another” (DEPF03, 10 March /2023). The headteacher of one of the secondary schools noted that “collaboration among the teachers is OK. For example, we have seen them do team teaching” (HTM01, 7 March 2023).

Similarly, another deputy head teacher supported the idea of peer support witnessed among the teachers in secondary schools in the Greater Arua.

Through the staff development program, peer support has also been influential here. Then the lower secondary school curriculum has also added to this because they have deliberately said you should come to your colleague, who you may think knows an area better than you. You invite them to your class in order to come and see whether what you're doing is the right thing. However, some teachers have remained in those days. They work alone without the help of their colleagues even if things are not going well. This is dangerous! (DEPF01, 7 March 2023).

Another participant recommended that: “Teachers should have a positive attitude working with their peers. These are the competence we want for the lower secondary curriculum. We also want learners to work together” (DEPM06, 15 March 2023). This implies that for teachers to perform excellently, they need to work together with colleagues through peer coaching and mentoring.

The idea of peer coaching came vividly during interaction with one of the participants who expressed that:

I want to begin by quoting that if you want to look far then you should stand on the shoulders on the giant. Exactly this is what our teachers do. They get support from their peers. They yearn for new knowledge and are willing to receive support from their fellow teachers through team teaching, mentoring and coaching” (HTF08, 17, March 2023).

During the post-observation interviews with teachers, they expressed varying degrees of engagement in professional learning. Overall, teachers expressed possession of professional learning competence characterised by engaging in professional dialogue, acting as critical friends, reflective practice and collaborating with colleagues. Professional dialogue with colleagues is a crucial aspect of workplace communication that significantly influences teacher effectiveness. One teacher had this to say: “From my department of English, we normally bring issues to the table and deliberate on them. This helps us to improve the teaching of English in this school” (TM04, 13 March 2023). This was confirmed by another teacher who said:

In the teaching profession, dialogue is very important because you agree with your peer on how to improve teaching and learning. For me, I have always discussed with my head of department on the ways to improve the teaching of math in our school (TM06, 09 March 2023).

One senior teacher added that they engage in dialogue as demanded by the revised lower secondary curriculum.

You cannot do without sharing with your colleagues. You cannot be a highlander in the school! Afterall it is a requirement by the Lower Secondary Curriculum that you share information during lesson planning for effective teaching. Through dialogue, new teachers are supported to grow in the profession. (TM24, 15 March 2023).

However, some participants provided contrary view on the existence of professional dialogues in secondary schools in Greater Arua.

I want to be honest that here some teachers do not want to cooperate. They feel we don't belong to their age. During departmental discussions, they want to be heard more than the others. Professional dialogue is not happening as expected (TF16, 13 March 2023).

Professional dialogue is also affected by teacher characteristics such as age and teaching experience as noted by one of the teachers. “Dialogue is affected by the difference in age. Senior teachers want to interact with their agetates and yet certain things like ICT are known by us, the junior teachers” (TM36 20 March 2023).

These expressions underscore the importance of fostering clear, open, and effective communication among teachers within the school. In the dynamic education landscape, professional dialogue becomes increasingly important for maintaining productive and satisfying work environments. However, some teachers still demonstrate negative attitudes towards interacting with colleagues. Secondly, professional dialogue varies with age and teaching experience.

Teachers also disclosed during post-observation interviews that they acted as critical friends to their colleagues. Critical friendship among teachers played a vital role in promoting professional growth and enhancing teaching practices, as expressed by most participants. “After classroom observation, I received feedback from my head of department. She is so friendly when discussing issues that happened during the teaching-learning process. I take her comments positively (TF32, 17 March 2023). Another teacher added: “I have a colleague with whom we share issues concerning the profession. He acts as my mentor. He guides me on how to maintain discipline in class. I treat him as my father” (TM09, 10 March 2023). One senior teacher also expressed the importance of critical friends in professional practice.

The use of ICT can be challenging. But I am happy with one young teacher. The ICT teacher is helping us a lot. I am now learning from him how to type using a computer. He takes you slowly. I have learnt

that mentorship is not top-down. Even a junior staff can mentor an expert teacher (TM15, 13 March 2023).

The above testimonies imply that teachers are involved in collaborating with peers whereby they can receive and provide constructive feedback, challenge assumptions, and support each other's professional development. Therefore, it can be concluded that participants believe that professional learning promotes the sharing of ideas leading to improved teaching and learning. Professional learning further enhances the desirable characteristics of an ideal teacher. Therefore, teachers should possess collaborative and networking skills to teach diverse learners using different techniques and materials. School-based managers should encourage collegiality in the form of professional learning communities in their schools so that teachers can support one another.

4.3.3 Status of Assessment Competence in Secondary Schools in Greater Arua, Uganda

Assessment competence was examined through eight quantitative items in which respondents provided self-ratings. A four-point Likert scale was applied, where 4 represented 'strongly agree' (SA), 3 'agree' (A), 2 'disagree' (D), and 1 'strongly disagree' (SD). The results are presented in Table 4.17.

Table 4.19
Descriptive Results on Assessment Competence

Indicators of assessment competence	SD	D	A	SA	$\bar{x}$	Std. Dev
I relate assessment tasks to top-planned learning outcomes	11 46%	34 14.1%	144 59.8%	52 21.6%	3.103	0.068
I use purposeful assessment tasks, which are integrated across sequences of learning experiences	8 3.3%	54 22.4%	130 53.9%	49 20.3%	3.033	0.075
I design assessment tasks inclusive of all students that give opportunities to show their achievement	9 3.7%	42 17.4%	125 51.9%	65 27%	3.020	0.771
I include the use of ICT-enriched assessment tasks	44 18.3%	128 53.1%	42 17.4%	27 11.2%	2.215	0.872
I provide students with constructive feedback on achievement within the expected period.	4 1.7%	36 14.9%	159 66%	42 17.4%	2.991	0.625
I encourage student peer reflection where appropriate	28 11.6%	45 18.7%	126 52.3%	42 17.4%	2.755	0.876
I conduct assessment activities following the recommended policies	13 5.4%	27 11.2%	139 57.7%	62 25.7%	3.037	0.765
I record student learning outcomes accurately and consistently	7 2.9%	25 10.4%	136 56.4%	73 30.3%	3.141	0.710
Aggregate Mean and SD					2.91	0.60

Source: Primary data, 2023

Table 4.19 indicates that assessment competence is at a moderate level, with a mean of 2.91 and a standard deviation (SD) of 0.60. Notably, 81.4% of respondents agreed that they align assessment tasks with planned learning outcomes, whereas 18.7% disagreed. This suggested that respondents indeed related assessment tasks to planned learning outcomes. This finding is supported by a mean score of 3.103, corresponding to code 3 (agreement) on the employed Likert scale. Additionally, the low standard deviation of 0.668 suggests that respondents' opinions were largely consistent.

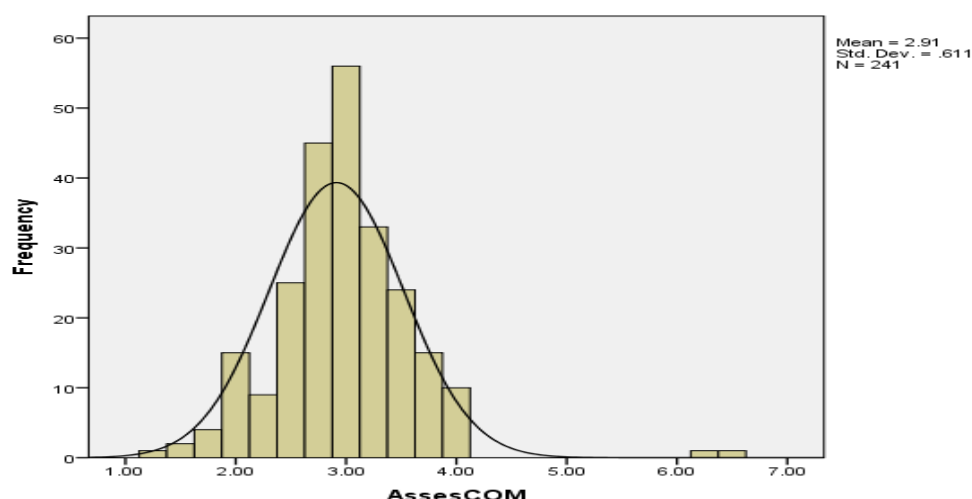
A majority of respondents, 74.2%, indicated that they employ purposeful assessments that are integrated throughout sequential learning experiences. This was opposed to 25.7% who disagreed. These percentages were almost similar, with a mean of 3.033, which confirmed agreement with the item under investigation. Again, the standard deviation of 0.0753 implies that the respondents' views on this item are similar to one another.

Similarly, a large number of the study respondents, 78.9%, agreed that they designed assessment tasks that included all students and allowed them to demonstrate achievements in a variety of ways. This differed from 21.1% who disagreed on the same. A mean of 3.027 was almost equal to code 3, which agrees with the Likert scale that was used, implying that inclusiveness is considered when designing assessment tasks that allow students to demonstrate achievement in their academic engagements. The standard deviation of 0.771 indicates that respondents' opinions were largely consistent.

Additionally, of the respondents, 71.4% disagreed that they included the use of ICT-enriched assessment tasks. This differed from 28.6% who agreed. These percentages were in line with the mean of 2.215, which confirmed disagreement with the inclusion of ICT-enriched assessment tasks. This means that ICT is not widely used in the assessment of students in secondary schools in the Greater Arua. The majority of respondents, 83.4%, reported that they provide students with timely and constructive feedback on performance, while 16.6% disagreed. A mean score of 2.991 closely corresponds to code 3 (agreement) on the Likert scale used. This implied that teachers do give constructive feedback within an appropriate time frame.

A majority of respondents, 67.7%, indicated that they promote student peer reflection when appropriate, compared to 30.3% who disagreed. The mean score of 2.755 closely aligns with code 3 (agreement) on the employed Likert scale. Hence, it is suggested that peer reflection is dependent on where it is deemed appropriate. This standard deviation of 0.876 was low, implying that respondents had similar views and opinions on this item.

The majority of the study respondents, 83.4%, agreed that they conduct assessment activities following recommended policies. This was opposed to 16.7% who disagreed. A mean of 3.037 was almost equal to code 3, according to the Likert scale used. This, hence, shows that there was an agreement to assess following the recommended policies in the Greater Arua. Finally, 86.7% agreed that they record student learning outcomes accurately and consistently. This differed from the 13.3% who disagreed. A mean of 3.141 was equal to the code 3 agreement on the Likert scale that was used. On average, 51.9% of the respondents agreed, and 21.3% strongly agreed that they have a high level of assessment competence. The percentages and mean, in general, suggested that teachers in secondary schools in the Greater Arua had the required assessment competence. In comparison, the standard deviations were generally low. This meant thus that the respondents had almost similar views and opinions in aspects related to assessment competence. These findings imply that head teachers should strengthen the use of ICT in assessment, which is rated very low.



Source: Primary data, 2023

Figure 4.6

Histogram and Curve Showing the Distribution of Respondents on Assessment Competence

Figure 4.6 illustrates that most respondents are clustered on the right side of the histogram and curve, reflecting a moderate level of agreement with assessment competence. This suggests that head teachers should implement strategies to enhance teachers' assessment skills in secondary schools in Greater Arua, Uganda

To reinforce survey findings on the status of assessment competence, classroom observation was used to collect data by observing four (04) teachers per school. In order to examine the level of assessment competence exhibited by teachers of different years of experience, a cross-tabulation was conducted to determine the status of competence demonstrated by the expert, average and novice teachers, as presented in the table below. Teachers were rated as Unsatisfactory, Satisfactory, Good or Outstanding for each of the competence areas. Data collected from classroom observation revealed that teachers observed exhibited varying levels of competence as presented in the following section.

Table 4.20
Cross Tabulation for Assessment of Competence Against Teaching Experience

Assessment competence	Cases											
	Unsatisfactory			Satisfactory			Good			Outstanding		
	Expert teachers	Average	Novice	Expert teachers	Average	Novice	Expert teachers	Average	Novice	Expert teachers	Average	Novice
Relate assessment tasks to planned learning outcomes	1 2.5%	0 0%	0 0%	1 2.5%	1 2.5%	3 7.5%	4 10%	6 15%	7 17.5%	8 20%	1 2.5%	8 20%
Design assessment activities that are consistently incorporated across learning sequences	0 0%	0 0%	0 0%	5 12.5%	2 5%	1 2.5%	4 10%	5 12.5%	10 25%	5 12.5%	1 2.5%	7 17.5%
Design inclusive assessment activities that give students various opportunities to demonstrate learning outcomes	1 2.5%	1 2.5%	2 5%	4 10%	3 7.5%	4 10%	4 10%	3 7.5%	7 17.5%	5 12.5%	1 2.5%	5 12.5%
Include the use of ICT-enriched assessment tasks.	15 37.5%	12 30%	6 15%	1 2.5%	1 2.5%	0 0%	1 2.5%	1 2.5%	2 5%	0 0%	0 0%	1 2.5%
Provide learners with helpful feedback on their performance in a timely manner	1 2.5%	0 0%	0 0%	0 0%	2 5%	3 7.5%	11 27.5%	4 10%	8 20%	2 5%	2 5%	7 17.5%
Encourage student peer reflection where appropriate	0 0%	0 0%	1 2.5%	3 7.5%	1 2.5%	1 2.5%	6 15%	6 15%	6 15%	5 12.5%	1 2.5%	10 25%
Conduct assessment activities in accordance with the recommended policies.	0 0%	0 0%	1 2.5%	8 20%	1 2.5%	8 20%	4 10%	6 15%	4 10%	1 2.5%	1 2.5%	6 15%
Record student learning outcomes accurately and consistently	5 12.5%	1 2.5%	5 12.5%	5 12.5%	2 5%	4 10%	3 7.5%	5 12.5%	4 10%	0 0%	0 0%	5 12.5%

Source: Primary data, 2023

From the results presented in Table 4.20, in relating assessment tasks to planned learning outcomes, 42.5% (10% expert; 15% average; 17.5% novice) and 42.5% (20% expert; 2.5% average; 20% novice) of the observed teachers were rated at outstanding levels, respectively, against 2.5% (2.5% expert; 0% average; 0% novice) rated unsatisfactory. Similarly, 47.5% of teachers (10% expert, 12.5% average, and 25% novice) were rated as good in using purposeful assessment tasks that are integrated across sequences of learning experiences, while none were rated as unsatisfactory. Additionally, 35% of teachers (10% expert, 7.5% average, and 17.5% novice) were rated as good in designing assessment tasks that are inclusive of all students, allowing them to demonstrate their achievements in various ways. However, 10% (2.5% expert, 2.5% average; 5% novice) were rated unsatisfactory.

On the use of ICT-enriched assessment tasks, 72.5% (37.5% expert; 30% average; 15% novice) teachers were rated at an unsatisfactory level, against 2.5% (0% expert; 0% average; 2.5% novice) rated at an outstanding level. In providing students with constructive feedback on performance within an appropriate time frame, 57.5% (27.5% expert; 10% average; 20% novice) were rated at a good competence level, against 2.5% (2.5% expert; 0% average; 0% novice) at an unsatisfactory level. In encouraging student peer reflection, 45% (15% expert; 15% average; 15% novice) and 40% (12.5% expert; 2.5% average; 25% novice) teachers were rated good, and outstanding against 2.5% (0% expert; 0% average; 2.5% novice) rated at unsatisfactory level. On the contrary, 42.5% (20% expert, 2.5% average, 20% novice) of teachers observed were rated satisfactory in conducting assessment activities per the recommended policies. This is against 20% (2.5% expert, 2.5%

average; 15% novice) of the observed teachers rated outstanding. Finally, 30% (12.5% expert; 2.5%; average 12.5% novice) and 30% (12.5% expert; 5% average; 10%) were rated at unsatisfactory and satisfactory levels of competence in recording student learning outcomes accurately and consistently, respectively. The findings indicate that most secondary school teachers in Greater Arua have limited skills in using ICT tools for student assessment. This suggests that head teachers should implement strategies to strengthen teachers' knowledge and abilities in integrating ICT into assessment practices in these schools. This was evident in both the survey and interview results presented above.

From interviews with head teachers of secondary schools in Greater Arua, participants all agreed that every secondary school teacher should possess assessment competence, but on the ground, not all the teachers exhibit this competence uniformly.

One head teacher said,

In the process of teaching, there is, of course, assessment for learning that the teacher should have knowledge and skills in, but some of our teachers don't engage in formative assessment. They only wait until the end of the term. Most teachers now rely on buying examination papers (HTF07, 16 March 2023).

Another participant confirmed that formative assessment has not been embraced widely, as expected.

My experience is that they have not embraced formative assessment well. That, to me, is because they want to stick to the old ways of teaching. Maybe they do not want to explore new grounds. Thus, they find it hard. They find it a lot challenging, and they love the old and easier ways (DEPF03, 10 March 2023).

Similarly, another added that:

A teacher, whoever, I think of is someone who can evaluate himself at the end of his lesson and then also. Understand the students' level of attention by trying to throw brainstorming questions on whether they understand the concepts being taught but unfortunately some of these teachers teach and go away without giving oral questions or exercise to the learners (HTF08, 17 March 2023).

Another participant added that a competent teacher reviews the lesson to gauge the understanding of the learners as well as to diagnose learning challenges as a way of addressing the gaps, as reflected in the quote below.

A competent teacher will quickly also review the lesson to see whether what he had been giving the children, whether they picked but during lesson observation, I see teachers teach without review or recap of the lesson. Formative assessment has really suffered in our schools generally today (DEPM02, 09 March 2023).

This claim was supported by one other participant from Greater Arua city who believed that assessment is one of the skills possessed by a competent teacher. He reported that some of their teachers do not evaluate their lessons, neither do they conduct self-evaluation, and yet a competent teacher evaluates learners and also does self-evaluation for purposes of improvement (DEPM09, 20 March 2023). A competent teacher also, according to participants, finds remedies to instructional challenges Expert teachers by learners. One head teacher of Arua city said, “Some of my teachers are competent because they give remedial care to students who are struggling” (HTF07, 16 March 2023).

The level of teacher competence was also evaluated on how teachers integrate ICT in assessment. From interviews, it was found that very few teachers demonstrated knowledge and skills in the use of ICT.

The use of ICT while assessing learners is very low in this school. A majority of teachers here are ICT illiterate. They cannot set online

quizzes. They cannot even set holiday package online. They always want to rely on hard copies which are bought from Kampala (DEPM10, 21 March 2023).

The above remarks by the interview participants imply that teachers should possess knowledge and skills in assessing student learning. However, most of these teachers do not conduct formative assessment of their learners regularly, using relevant criteria as stipulated in the assessment policy.

4.3.4 Status of Technological Competence in Secondary Schools in Greater Arua

The technological competence of teachers in the Greater Arua was the fourth aspect of competence. The study evaluated technological competence using eight self-rated quantitative measures. The four-point Likert scale was used. Results on the status of technological competence are offered in Table 4.21.

Table 4.21
Descriptive Results on Technological Competence

ITEMS	SD	D	A	SA	$\bar{x}$	Std. Dev
I encourage students to appropriately use ICT tools to enhance critical thinking	53 22%	112 46.5%	50 20.7%	26 10.8%	2.203	0.906
I encourage students to use appropriate traditional instructional resources to enhance critical thinking.	7 2.9%	53 22%	148 61.4%	33 13.7%	2.85	0.674
I leverage the entire school environment to support student learning	6 2.5%	42 17.4%	146 60.6%	47 19.5%	2.971	0.685
I ensure equitable access to ICT resources for all learners	13 2.7%	87 36.1%	116 56%	25 5.2%	2.439	0.620
I ensure equitable use of physical resources to help students reach their educational goals	26 10.8%	132 54.8%	63 26.1%	20 8.3%	2.800	0.764
I incorporate technology into lessons to support students in reaching planned learning goals	33 13.7%	149 61.8%	38 15.8%	21 8.7%	2.195	0.779
I offer students chances to apply ICT tools for various educational purposes	34 14.1%	138 57.3%	51 21.2%	18 7.5%	2.219	0.778
I tailor the use of technology to ensure it meets all students' learning requirements	46 19.1%	137 56.8%	39 16.2%	19 7.9%	2.128	0.808
Aggregate Mean and SD					2.48	0.75

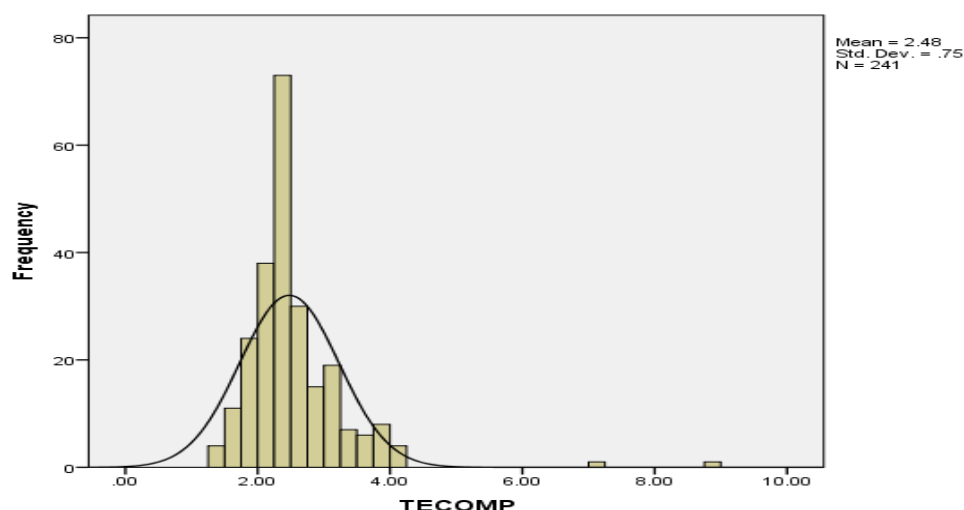
Source: Primary data, 2023

Table 4.21 shows that the level of technological competence among teachers in Greater Arua secondary schools is low, with a mean of 2.48 and a standard deviation of 0.75. Specifically, 68.5% of respondents disagreed that they encourage students to use appropriate ICT tools to enhance critical thinking, while 31.5% agreed. This corresponds with a mean of 2.203 (code 2: 'disagree') and a low standard deviation of 0.906, indicating similar views among respondents. In contrast, 75.1% of respondents agreed that they

encourage students to use instructional resources such as charts and audio-visual aids to enhance critical thinking, while 24% disagreed. The mean of 2.858 (close to code 3: 'agree') and a low standard deviation of 0.674 suggest that respondents shared similar opinions on the use of traditional resources.

Furthermore, 71.1% agreed that they utilize the whole school environment to enhance student learning, supported by a mean of 2.971 and a low standard deviation of 0.685. However, 65.6% disagreed that they manage access to ICT resources inclusively, compared to 34% who agreed, with a mean of 2.439 (code 2: 'disagree'). Conversely, 58.5% agreed that they manage access to physical resources inclusively to facilitate student achievement, while 41.5% disagreed, indicating that teachers generally ensure equitable access to physical resources.

Moreover, 71.4% disagreed that they provide opportunities for students to use ICT for various purposes, corresponding with a mean of 2.219 (code 2: 'disagree') and low variation among respondents. Similarly, 75.9% disagreed that they apply ICT considering the needs of all learners, with a mean of 2.128, reflecting difficulties in adjusting ICT use to accommodate diverse learning needs. Overall, the percentages and mean scores indicate that technological competence among teachers in Greater Arua is fairly limited, with 11% of respondents strongly disagreeing and 44.1% disagreeing on average. Summary results are presented in Figure 4.7.



Source: Primary data, 2023

Figure 4.7

Histogram and Curve Showing the Distribution of Respondents on Technological Competence

Findings in Figure 4.7 show that the average mean on teacher competence was 2.48, and the standard deviation was 0.75. In line with this, it was established that teacher competence status was low. This was because the average level of technological competence was low. This implies that head teachers should devise strategies to strengthen teachers' technological competence.

To reinforce survey findings on the status of technological competence, classroom observation was used to collect data by observing four (04) teachers per school. In order to examine the level of technological competence exhibited by teachers of different years of experience, a cross-tabulation was conducted to determine the status of competence demonstrated by the expert, average and novice teachers, as presented in the table below. Teachers were rated as Unsatisfactory, Satisfactory, Good or Outstanding for each of the competence areas. Data collected from classroom observation revealed that teachers exhibited varying levels of competence as presented in the following section.

Table 4. 22
Cross Tabulation for Technological Competence Against Teaching Experience

Teacher competence	Cases											
	Expert teachers	Unsatisfactory Average	Novice	Expert teachers	Satisfactory Average	Novice	Expert teachers	Good Average	Novice	Expert teachers	Outstanding Average	Novice
Encourage students to use ICT tools to enhance critical thinking.	18 45%	6 15%	12 30%	1 2.5%	1 2.5%	0 0%	0 0%	1 2.5%	0 0%	1 2.5%	0 0%	0 0%
Encourage students to use traditional instructional resources to enhance critical thinking.	6 15%	1 2.5%	6 15%	1 2.5%	4 10%	2 5%	1 2.5%	0 0%	2 5%	6 15%	3 7.5%	6 15%
Utilise the entire school environment to promote student learning.	3 7.5%	4 10%	3 7.5%	1 2.5%	3 7.5%	3 7.5%	0 0%	5 12.5%	9 22.5%	6 15%	1 2.5%	7 17.5%
Ensure equitable access to ICT resources for all students.	18 45%	12 30%	6 15%	1 2.5%	2 5%	0 0%	0 0%	0 0%	0 0%	1 2.5%	0 0%	0 0%
Ensure equitable management of physical resources so that all students can access them, supporting the achievement of learning outcomes	5 12.5%	2 5%	7 17.5%	2 5%	2 5%	2 5%	0 0%	2 5%	2 5%	7 17.5%	2 5%	7 17.5%
Integrate ICT into learning experiences to support achieving learning outcomes	18 45%	12 30%	6 15%	1 2.5%	3 7.5%	0 0%	0 0%	0 0%	0 0%	1 2.5%	0 0%	0 0%
Provide opportunities for students to use ICT for a variety of purposes	18 45%	6 15%	12 30%	1 2.5%	2 5%	0 0%	0 0%	0 0%	0 0%	1 2.5%	0 0%	0 0%
Adapt the use of ICT to accommodate and support the diverse learning needs of all students	18 45%	12 30%	6 15%	1 2.5%	2 5%	0 0%	0 0%	0 0%	0 0%	1 2.5%	0 0%	0 0%

Source: Primary data, 2023

From the Table 4.22 above, the classroom observation rating put 90% of observed teachers (30% expert; 15% average and 45% novice) at unsatisfactory level in encouraging students to use appropriate ICT tools to enhance critical thinking, against 2.5% (2.5% expert; 0% average and 0% novice) teachers who were rated at outstanding level. In the same vein, in encouraging students to use appropriate traditional instructional resources such as charts, audio-video aids to enhance critical thinking, 42.5% (15% expert; 7.5% average and 20% novice) of the observed teachers were rated unsatisfactory against 32.5% (15% expert; 2.5% average; 15% novice) teachers rated at outstanding level. However, it should be noted that 35% (15% expert, 2.5% average, 17.5% novice) teachers observed encouraged students to utilise the whole school as an environment to enhance student learning. This is against 25% (7.5% expert, 10% average, 7.5% novice) teachers rated unsatisfactory in encouraging students to utilise the whole school as an environment to enhance student learning.

In managing access to ICT resources that is inclusive of all students, 90% (45% expert; 15% average; 30% novice) of the teachers observed were rated at an unsatisfactory level, while 2.5% (2.5% expert; 0% average; 0% novice) of the teachers observed were rated at an outstanding level. In comparison, a greater number of expert teachers were rated very low in the use of ICT, compared to the novice teachers. This reveals evidence of a digital divide between the veteran teachers and the newly qualified teachers. Contrary to the above, 40% (17.5% expert; 5% average; 17.5% novice) of the teachers observed were rated outstanding in managing access to physical

resources, which is inclusive of all students, against 35% 12.5% expert; 5% average; 17.5% novice) teachers were rated at an unsatisfactory level.

During classroom observation, 97.5% (45% expert; 12.5% average; 30% novice) teachers were rated at an unsatisfactory level in the implementation of learning experiences that use ICT to support the attainment of planned learning outcomes. This is against 2.5% (2.5% expert; 0% average; 0% novice) teachers rated at the outstanding level in the implementation of learning experiences that use ICT to support the attainment of planned learning outcomes.

Additionally, in implementing learning experiences that use ICT to support the attainment of planned learning outcomes, 87.5% (45% expert; 12.5% average; 30% novice) of the teachers observed were rated at an unsatisfactory level, against 2.5% (2.5% expert; 0% average; 0% novice) rated at an outstanding level. In providing opportunities for students to use ICT for a variety of purposes, 90% (45% expert; 30% average; 15% novice) of the observed teachers were rated at an unsatisfactory level, as opposed to only 2.5% 1 (2.5% expert; 0% average; 0% novice) rated at an outstanding level. Finally, in adjusting the use of ICT to be inclusive of students' learning needs, 90% (45% expert; 30% average; 15% novice) teachers observed were rated at an unsatisfactory level against only 2.5% (2.5% expert; 0% average; 0% novice) of the teachers rated at an outstanding level. These results revealed that most teachers still exhibit inadequate knowledge, attitudes and skills in integrating ICT in their teaching. This could partly explain the disparity in performance between rural and urban areas.

Interview results show that school-based supervisors believed that teachers should possess both traditional and modern technologies. However, practically, most of the teachers do not demonstrate high competence in modern technologies such as computers and smartphones. One head teacher said: “The competent teacher should be able to improvise teaching materials in case they are not available. However, most teachers don’t improvise; instead, they want the schools to procure these items” (HTM09, 20 March 2023). Relatedly, one of the head teachers of the Greater Arua concurred with the previous participant and said that a competent teacher should have knowledge of physical materials but should also embrace the use of ICT (HTM08, 17 March 2023).

Under technological competence, the integration of Information Communication and Technology (ICT) seems to remain a significant challenge for secondary school teachers in Greater Arua. Most supervisors revealed that a majority of their teachers have not embraced the use of ICT in the teaching and learning process. “Experience shows that a good number of the teachers who are old get many challenges in the ICT integration” (HTM01, 7 March 2023). Another participant added:

Well, I can say that most teachers do not use ICT and yet a teacher should know the tools and knows where they can get the teaching resources, particularly in order to aid learning. If he were teaching about the issue of lava down the lakes, ICT could have been employed. Then, even diagrams, particularly on charts, flip charts, and so on, will have actually been more captivating when it comes to teaching (HTM03, 10 March 2023).

The teacher is expected to demonstrate competence in managing access to ICT resources that is inclusive of all students. However, during interviews with head teachers and deputy head teachers, they revealed that most teachers

do not plan the use of ICT resources that cater for all learners. One participant had this to say:

Our school has a computer laboratory with some computers, but these teachers don't bother to conduct their lessons using these tools. Only students who are sharp go to the laboratory. The rest don't bother, and no teacher encourages them. Some teachers have given up on the use of ICT, and yet that is the way to go! (HTF06, 15 March 2023).

Relatedly, one participant revealed that most teachers demonstrate their inability in implementing learning experiences that use ICT to support the attainment of planned learning outcomes. "Because these teachers do not have adequate knowledge to use ICT, some learning outcomes that could have been attained using ICT are left out. This put the learners at a disadvantage" (HTF08, 17 March 2023). Another participant added that "The old teachers are affected when it comes to use of ICT. I don't know whether they will cope with the demand of the lower secondary curriculum that demands ICT for research and teaching" (DEPM04, 13 March 2023).

Most study participants expressed fear that the inability to integrate ICT in the teaching-learning process may result to production of graduates with limited ICT skills.

These teachers do not use ICT and they do not help students. I am personally worried about these students who progressed to the next level without the required ICT skills. They will face problem when they reach the university that demands a lot of ICT use. Most jobs today require the knowledge of ICT" (HTM01, 7 March 2023).

This implies low level of ICT literacy and yet every teacher must have skills in integrating ICT into their teaching, especially now that Uganda is implementing the revised lower secondary curriculum.

The use of traditional teaching materials was rated high by most of the interview participants. The head teacher in one of the secondary schools in Arua city also concurred with her colleagues that a competent teacher should have the knowledge, skills and positive attitudes towards the use of traditional teaching-learning aids and modern technology like computers and phones, as stated in the verbatim quote below.

I have observed that most of our teachers use traditional teaching materials. They make illustrations on Manila charts. The teachers also use the local environment as a learning ground especially when teaching Geography, Agriculture and Biology (HTF02, 9 March 2023).

From the above submissions by the study participants, it can be concluded that technological competence is vital in the teaching-learning process. Therefore, a competent teacher selects and uses learning aids appropriately during the teaching-learning process. He/she also makes good use of locally available teaching-learning materials from the school and surrounding environment in teaching various content of his/her discipline. Teachers also exhibit competence in the use of the school environment to draw instructional resources to enhance teaching.

On designing and using traditional teaching-learning aids, supervisors applauded teachers, as expressed by one head teacher.

In designing teaching materials, you see there are certain subjects that do well in that area, such as biology, agriculture, and geography. I see these ones do a lot, but I don't see them do that a lot for some of the subjects. I don't see them use a lot of the local resources (HTM09, 20 March 2023).

This indicates that most teachers recognize the significance of the local environment in enhancing the teaching and learning process. They actively utilize resources from their surroundings to obtain low-cost instructional

materials, including realia, models, and a variety of specimens, which help make learning more practical, relevant, and engaging for students.

4.4 Objective Three: Relationship between directive supervision and teacher competence in secondary schools in Greater Arua

The third objective of this study was to examine the relationship between directive supervision and teacher competence in secondary schools in Greater Arua. To test the corresponding hypothesis, Pearson's correlation coefficient was employed. Pearson's correlation is a statistical measure used to determine the strength and direction of a linear relationship between two continuous variables. In this context, it was used to assess the extent to which the level of directive supervision is associated with variations in teacher competence. A positive correlation would indicate that higher levels of directive supervision are associated with higher teacher competence, whereas a negative correlation would suggest the opposite. The results of this analysis are presented in Table 4.23, offering insight into the influence of supervisory practices on teachers' professional performance.

Table 4.23

Pearson's Correlation Between Directive Supervision and Teacher competence

		Teacher Competence Enhancement	Directive Supervision
	Pearson's correlation	1	0.144**
	Sig 2-tailed		0.026
	N	241	241
Directive supervision	Pearson's correlation	0.144**	1
	Sig 2-tailed	0.026	
	N	241	241

Correlations significant at 0.05 level, 2-tailed

Source: Primary data, 2023

Table 4.23 presents the Pearson's correlation coefficient between directive supervision and teacher competence. The computed correlation coefficient (r) is 0.144, indicating a positive relationship. This suggests that as the level of directive supervision increases, teacher competence also tends to improve, and vice versa. The associated p -value is 0.026, which is below the 0.05 significance level, showing that the correlation is statistically significant.

Although the relationship is weak, the finding demonstrates that directive supervision plays a meaningful role in enhancing teacher competence in secondary schools in Greater Arua. This implies that while other factors may also influence teacher competence, supervisory practices that provide clear guidance, direction, and monitoring contribute positively to teachers' professional performance. Consequently, the null hypothesis, which stated that there is no statistically significant positive relationship between directive supervision and teacher competence, is rejected, and the alternative hypothesis is accepted.

The implications of these results are multi-faceted. First, they suggest that head teachers and school administrators should strengthen the use of directive supervision as part of their management strategy to improve instructional quality. Second, professional development programs for teachers could incorporate elements of structured guidance and targeted supervision to enhance competence. Third, policymakers and educational planners may consider providing resources, training, and frameworks that support effective supervisory practices in schools. Overall, these findings underscore the importance of consistent and structured oversight in promoting teacher effectiveness and improving student learning outcomes in secondary schools in Greater Arua, Uganda.

4.5 Objective Four: The Relationship between collaborative supervision and teacher competence in secondary schools in Greater Arua

The fourth objective of this study was to examine the relationship between collaborative supervision and teacher competence in secondary schools in Greater Arua. To test the corresponding hypothesis, Pearson's correlation coefficient was employed. Pearson's correlation is a statistical tool used to measure the strength and direction of a linear relationship between two continuous variables.

In this context, it assesses the extent to which variations in collaborative supervision are associated with changes in teacher competence. A positive correlation would indicate that higher levels of collaborative supervision are associated with higher teacher competence, whereas a negative correlation would suggest the opposite. The results of this analysis are

presented in Table 4.24, providing insight into the influence of collaborative supervisory practices on teachers' professional performance

Table 4. 24
Pearson's Correlation Coefficient Analysis for Collaborative Supervision and Teacher competence

		Teacher competence	Collaborative supervision
Teacher competence	Pearson's correlation	1	0.145**
	Sig 2-tailed		0.024
	N	241	241
Collaborative supervision	Pearson's correlation	0.145**	1
	Sig 2-tailed	0.024	
	N	241	241

Correlations significant at the 0.05 level, 2-tailed

Source: Primary data, 2023

Table 4.24 presents the Pearson's correlation coefficient between collaborative supervision and teacher competence. The computed correlation coefficient (r) is 0.145, indicating a positive relationship. This suggests that an increase in collaborative supervision is associated with an increase in teacher competence. The p-value of 0.024 is below the 0.05 significance level, demonstrating that the correlation is statistically significant.

Although the relationship is weak, it confirms that collaborative supervision contributes positively to teacher competence in the selected secondary schools in Greater Arua. Consequently, the null hypothesis, which stated that there is no statistically significant positive relationship between collaborative supervision and teacher competence, is rejected. The alternative hypothesis, which posits a statistically significant positive relationship between the two variables, is therefore accepted.

The implications of these findings are important for educational practice. They suggest that head teachers and school administrators should actively strengthen collaborative supervision practices, fostering teamwork, shared decision-making, and peer support among teachers. By doing so, teachers can enhance their instructional skills, improve lesson planning, and create a more supportive learning environment for students. Additionally, these findings underscore the need for professional development programs and policies that promote collaborative approaches to supervision, ensuring that teachers receive both guidance and opportunities for shared professional growth. Overall, collaborative supervision emerges as a valuable strategy for enhancing teacher competence and improving educational outcomes in secondary schools.

4.6 Objective Five: The Relationship between Non-Directive Supervision and Teacher competence in Secondary Schools in Greater Arua

The fifth objective of this study was to investigate the relationship between non-directive supervision and teacher competence in secondary schools in Greater Arua. To test this hypothesis, Pearson's correlation coefficient was used. Pearson's correlation is a statistical measure that evaluates the strength and direction of a linear relationship between two continuous variables.

In this study, it was applied to determine the extent to which variations in non-directive supervision are associated with changes in teacher competence. A positive correlation would suggest that higher levels of non-directive supervision are associated with higher teacher competence, while a negative correlation would indicate the opposite. The results of this analysis

are presented in Table 4.25, providing insight into the influence of non-directive supervisory practices on teachers' professional effectiveness.

Table 4.25
Pearson's Correlation Coefficient on Non-Directive Supervision and Teacher competence

		Teacher competence	Non-directive supervision
Teacher competence	Pearson's correlation	1	0.161*
	Sig 2-tailed		0.012
	N	241	241
Non-directive supervision	Pearson's correlation	0.161*	1
	Sig 2-tailed	0.012	
	N	241	241

Correlations significant at 0.05 level 2-tailed

Source: Primary data, 2023

Table 4.25 presents the Pearson's correlation coefficient between non-directive supervision and teacher competence. The calculated correlation coefficient (r) is 0.161, indicating a positive relationship. This suggests that an increase in non-directive supervision is associated with an increase in teacher competence. The p-value of 0.012 is below the 0.05 significance threshold, confirming that the correlation is statistically significant.

Although the relationship is weak, it demonstrates that non-directive supervision contributes positively to teacher competence in the selected secondary schools in Greater Arua. Consequently, the null hypothesis, which stated that there is no statistically significant positive relationship between non-directive supervision and teacher competence, is rejected. The alternative hypothesis, which posits a statistically significant positive relationship, is therefore accepted.

The implications of these findings are important for school management and policy. They suggest that head teachers should strengthen the implementation of non-directive supervision by fostering teacher autonomy, encouraging self-directed professional growth, and creating supportive environments that promote collaborative problem-solving. By integrating non-directive supervisory practices, schools can enhance teacher competence, boost instructional quality, and ultimately improve student learning outcomes. These results highlight the value of balancing guidance with professional freedom to empower teachers in secondary schools in Greater Arua

4.7 Regression Analysis for Instructional Supervision and Teacher competence

A regression analysis was conducted to examine the relationship between the dimensions of instructional supervision and teacher competence. The analysis aimed to determine how each dimension of supervision such as directive, collaborative, and non-directive, contributes to predicting teacher competence.

To begin, the model summary was computed to assess the overall fit of the regression model and its usefulness in explaining or predicting variations in teacher competence. The model summary provides key statistics, including the R-squared value, which indicates the proportion of variance in the dependent variable (teacher competence) that can be explained by the independent variables (the dimensions of instructional supervision). A higher R-squared value signifies that the model has greater predictive power and that the selected supervision dimensions effectively account for variations in teacher competence. Additionally, the model summary helps identify whether the regression model is appropriate for making reliable predictions and for

understanding the relative contribution of each supervisory dimension to teacher competence.

The results of this analysis are presented in Table 4.26, which provides insight into the explanatory and predictive power of the regression model regarding the influence of instructional supervision on teacher competence.

Table 4.26
Model Summary for Instructional Supervision and Teacher competence

Model Summary				
			Adjusted	R
Model	R	R Square	Square	Std. Error of the Estimate

1	.250 ^a	.063	.051	.50845
---	-------------------	------	------	--------

a. Predictors: (Constant), Directive Supervision, Collaborative supervision, Non-Directive supervision

Source: Primary data, 2023

The results indicate a correlation coefficient (R) of 0.250 and a coefficient of determination (R^2) of 0.063. This means that only 6.3% of the variation in teacher competence can be accounted for by these supervisory practices, while the remaining 93.7% is influenced by other factors not included in the model. The relatively low R^2 suggests that although instructional supervision positively affects teacher competence, its impact is limited, and additional variables play a substantial role in shaping teachers' professional effectiveness.

The practical implications of these findings are significant. First, head teachers should continue to strengthen and intensify supervisory practices to ensure teachers receive adequate guidance, feedback, and support in their professional duties. Second, policymakers and school administrators should recognize that improving teacher competence requires a multifaceted approach. This could include providing ongoing professional development opportunities, enhancing access to teaching and learning resources, promoting

teacher collaboration and peer mentoring, and addressing motivational and contextual factors that affect teaching performance. Third, schools could implement teacher evaluation and feedback systems that combine supervision with structured professional learning communities, ensuring that teachers benefit from both oversight and opportunities for self-directed growth.

Overall, while instructional supervision contributes positively to teacher competence, these findings highlight the need for complementary strategies to address the broader factors influencing teacher performance in secondary schools in Greater Arua, Uganda.

To determine whether the overall regression model provides a good fit for the data, an Analysis of Variance (ANOVA) was conducted. ANOVA tests whether the regression model significantly predicts the dependent variable (teacher competence) based on the independent variables, which are the dimensions of instructional supervision: directive, collaborative, and non-directive supervision. The ANOVA table provides a significance value (p-value), which indicates whether the observed relationship between the predictors and the dependent variable is statistically significant. A p-value less than the chosen significance level (typically 0.05) suggests that the regression model as a whole significantly predicts teacher competence, meaning that at least one of the supervision dimensions has a meaningful impact on teachers' professional effectiveness. Conversely, a p-value greater than 0.05 would imply that the model does not fit the data well and that the independent variables may not reliably explain variations in teacher competence.

Table 4.27
ANOVA for Instructional Supervision and Teacher competence

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.097	3	1.366	5.282	.002 ^b
	Residual	61.270	237	.259		
	Total	65.367	240			

a. Dependent Variable: LTcomp

b. Predictors: (Constant), Directive Supervision, Collaborative supervision, Non-Directive supervision

Source: Primary data, 2023

The results in Table 4.27 show a significance level of 0.002, which is below the 0.05 threshold. This indicates that the regression model is statistically significant ($F = 5.282$, $df = 3$, $p = 0.002$), confirming that the dimensions of instructional supervision have a meaningful relationship with teacher competence.

However, the effect size is relatively small, suggesting that while instructional supervision contributes to teacher competence, other factors not included in the model such as teacher experience, professional development, motivation, and resource availability likely play a substantial role in determining teachers' overall effectiveness. These findings highlight the importance of strengthening supervision practices while simultaneously addressing additional variables that influence teacher performance to achieve a more comprehensive improvement in teacher competence

Finally, a multiple linear regression analysis was conducted to examine the individual contribution of each dimension of instructional supervision: directive, collaborative, and non-directive supervision, to teacher competence. This analysis allows for an understanding of how each supervisory practice independently influences teacher performance while

controlling for the effects of the other dimensions. The results of this analysis are presented in Table 4.28.

Table 4.28
Regression Coefficients for Instructional Supervision and Teacher competence Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.662	.289		5.761	.000
	DSuper	.150	.063	.150	2.389	.018
	Collabo	.107	.053	.129	2.021	.044
	NDsuper	.175	.081	.138	2.153	.032

a. Dependent Variable: LTcomp

Source: Primary data, 2023

Table 4.28 shows that all three dimensions of instructional supervision—directive, collaborative, and non-directive supervision—have a statistically significant relationship with the dependent variable, teacher competence. Specifically, directive supervision has a p-value of 0.018 (< 0.05), non-directive supervision has a p-value of 0.032 (< 0.05), and collaborative supervision has a p-value of 0.044 (< 0.05). This indicates that each dimension is an individually valuable predictor of teacher competence. Analysis of the standardized coefficients (beta weights) further reveals the relative contribution of each dimension. Directive supervision is the highest contributor to teacher competence ($\beta = 0.150$), followed by non-directive supervision ($\beta = 0.138$), and collaborative supervision contributes the least ($\beta = 0.129$).

These findings suggest that most school-based supervisors in secondary schools in Greater Arua tend to rely more heavily on directive supervision, particularly when supporting new teachers or those seeking guidance for improvement. However, to maximize teacher competence, school-based supervisors should apply all dimensions of instructional

supervision strategically, tailoring their approach to the individual teacher's level of competence and professional needs. Strengthening the use of collaborative and non-directive supervision, alongside directive supervision, can foster professional growth, enhance teaching effectiveness, and improve overall student learning outcomes

4.8 Summary

This chapter presented the findings on the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. Specifically, the study examined the implementation of the different dimensions of instructional supervision: directive, collaborative, and non-directive, assessed the current status of teacher competence, and analyzed how each dimension of supervision relates to teachers' professional effectiveness. The chapter provided detailed statistical analyses, including descriptive statistics, correlation coefficients, and regression models, to explain the extent and significance of these relationships.

The results show that while there is a moderate application of directive supervision, both collaborative and nondirective supervisory approaches were applied at a low level. Data from the survey, using a self-administered questionnaire, lesson observation and interviews, revealed varying levels of teacher competence. The status of leadership, professional learning and assessment competence was moderate, while technological competence was low.

The study's hypothesis testing revealed that all three dimensions of instructional supervision have a statistically significant positive relationship with teacher competence in secondary schools in Greater Arua. Specifically,

the null hypothesis H01, which stated that there is no significant positive relationship between directive supervision and teacher competence, was rejected. The alternative hypothesis H1, positing a statistically significant positive relationship between directive supervision and teacher competence, was therefore accepted. Similarly, the null hypothesis concerning collaborative supervision, which stated that there is no significant positive relationship between collaborative supervision and teacher competence, was rejected. The alternative hypothesis H2, proposing a statistically significant positive relationship between collaborative supervision and teacher competence, was accepted.

Finally, the null hypothesis related to non-directive supervision, which stated that there is no statistically significant positive relationship between non-directive supervision and teacher competence, was also rejected. The alternative hypothesis H3, asserting a statistically significant positive relationship between non-directive supervision and teacher competence, was accepted. Overall, these findings indicate that directive, collaborative, and non-directive supervisory practices each contribute positively to enhancing teacher competence in secondary schools in Greater Arua, highlighting the importance of employing a balanced and context-appropriate approach to instructional supervision.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a detailed discussion, draws conclusions, and offers recommendations based on the study of the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. The study specifically examined the application of the three dimensions of instructional supervision: directive, collaborative, and non-directive supervision and their influence on teacher competence. The findings revealed that all three supervisory approaches have a statistically significant positive relationship with teacher competence, with directive supervision emerging as the most influential, followed by non-directive and collaborative supervision.

Additionally, regression and correlation analyses indicated that while instructional supervision contributes positively to teacher competence, the effect size is relatively modest, suggesting that other factors also play an important role in shaping teachers' professional effectiveness. This chapter, therefore, discusses the implications of these findings for school management and policy, draws conclusions about the impact of different supervision strategies on teacher competence, and provides practical recommendations for enhancing instructional supervision and overall teaching quality in secondary schools in Greater Arua.

5.1 Discussion of findings

5.1.1 Objective One: Application of the dimensions of instructional supervision in secondary schools in Greater Arua, Uganda

The first objective of the study was to assess the application of the dimensions of instructional supervision in secondary schools in Greater Arua, Uganda. The findings revealed that the application of directive supervision was moderate, the application of collaborative supervision was low, and the application of non-directive supervision was also low in secondary schools in Greater Arua, Uganda. According to Glickman et al. (2010), supervisors may adopt directive, collaborative, or non-directive supervision approaches depending on the competence level of the teacher. This means that the choice of supervisory strategy should align with the teacher's professional needs, experience, and ability to handle instructional challenges independently.

Supporting this perspective, Hoque et al. (2020) categorized teachers into four distinct groups based on their reliance on supervision: the first group includes teachers who depend heavily on their supervisors to provide solutions to instructional challenges; the second group comprises teachers who prefer to work jointly with supervisors to address such challenges; the third group includes teachers who view supervisors as supportive resources to consult as needed; and the fourth group consists of teachers who seek autonomy in managing instructional challenges and advancing their professional development.

The findings of this study indicate that all three supervisory approaches: directive, collaborative, and non-directive are applied almost equally in secondary schools in Greater Arua, with directive supervision

being more commonly used, especially for teachers who are new or require additional guidance. This aligns with Glickman et al. (2010), who argue that the primary purpose of developmental supervision is to facilitate professional growth, and therefore the supervisory approach should reflect the teacher's conceptual understanding and competence level.

Qualitative data from interviews with head teachers and deputy head teachers further corroborate the quantitative results, showing that while supervisors employ all three approaches, directive supervision remains the most frequently applied. Interview data from head teachers and deputy head teachers also support the quantitative results, indicating that all three instructional supervision approaches are used at similar levels, with directive supervision being the most frequently applied. Head teachers and deputy head teachers, during interviews, acknowledged conducting close monitoring through class visits to assist teachers in solving instructional challenges.

The implications of these findings for teacher competence and instructional quality are significant. First, the balanced application of all three supervision approaches ensures that teachers at different stages of professional development receive the appropriate guidance, fostering continuous improvement in instructional practices. Directive supervision supports teachers who need structured guidance, helping them acquire essential skills and confidence, while collaborative and non-directive approaches encourage experienced teachers to engage in reflective practice, innovate in lesson delivery, and develop autonomy. Second, by aligning supervisory strategies with teacher competence, schools can enhance instructional quality, as teachers are better equipped to plan lessons, assess

student learning effectively, and implement engaging teaching methods. Finally, these findings suggest that school administrators should invest in training supervisors to recognize teacher needs and apply a mix of supervision strategies strategically, thereby promoting both teacher growth and improved learning outcomes for students.

The findings are incongruent with those of Hoque et al. (2020), who discovered that supervisors employ directive, collaborative, and non-directive approaches depending on the category of teacher. Directive supervision is often used with novice teachers to strengthen their instructional skills, while collaborative supervision is applied to teachers who can contribute solutions to instructional challenges. Non-directive supervision is reserved for teachers capable of independently addressing instructional issues. Strieker et al. (2016) also reported the use of all three approaches, and Karnati (2019) noted that principals select the supervision style based on teachers' needs: directive for those with low conceptual levels, collaborative for knowledgeable and proactive teachers, and non-directive for highly skilled and autonomous teachers.

These findings align with the current study, where school-based supervisors adjusted their approach according to teachers' experience and competence during lessons. However, directive supervision was applied more frequently. One head teacher confessed that they direct some teachers on what to do because this would reduce ambiguity, especially for the novice teachers who may feel overwhelmed. In a directive approach, teachers are given specific instructions on what is expected in their lesson planning, classroom management and assessment of learning. Frequent monitoring and

direct feedback, which are elements of directive supervision, lead to teaching effectiveness and professional development. This finding aligns with Glickman et al. (2010), who argue that in developmental supervision, supervisors should first assess a teacher's current conceptual and professional level and then provide feedback and support tailored to facilitate progression to the next level of competence. The results of this study indicate that, in the secondary schools examined, supervisors predominantly employed directive supervision, with less frequent use of collaborative or non-directive approaches.

Similarly, Karnati (2019) found that in academic supervision aimed at enhancing elementary teachers' competence, directive supervision was applied more frequently than collaborative or non-directive methods. This pattern suggests that supervisors tend to rely on directive strategies, particularly when guiding teachers who need structured support or are still developing key instructional skills. This implies that supervisors believed that directive supervision enables teachers to follow and adhere to curriculum goals. Thus, ensuring that the professional responsibilities are being met consistently. Directive supervision is effective in developing the teacher's foundational teaching skills when effective practices are modelled and reinforced. Directive supervisors offer structured support that boosts confidence in new teachers as they learn the ropes of teaching.

Relying primarily on directive supervision has several implications for teacher competence and instructional quality. On the positive side, directive supervision provides clear guidance, ensures adherence to curricular standards, and supports less experienced teachers in acquiring foundational

skills, helping to reduce instructional errors and maintain a baseline quality of teaching. However, overreliance on this approach may limit teachers' opportunities for reflective practice, professional autonomy, and the development of problem-solving and innovative teaching abilities. Teachers may become dependent on supervisors for solutions rather than developing the capacity to independently address instructional challenges. Over time, this could slow professional growth and constrain the development of higher-order competencies, ultimately affecting instructional quality and student learning outcomes.

To optimize the impact of supervision, school administrators should promote a balanced approach that integrates directive, collaborative, and non-directive methods. By tailoring supervisory strategies to individual teachers' experience, competence, and professional needs, supervisors can provide guidance where necessary while simultaneously fostering autonomy, reflective practice, and innovation, thereby enhancing both teacher competence and overall instructional quality in secondary schools.

The application of collaborative supervision was evident, though at a low level. Collaborative supervision has emerged as a transformative approach to enhancing instructional quality and professional development among teachers. Head teachers during interviews viewed collaborative supervision as a strategy used to build a connection that permits decision-making toward mutually specified goals, and thus teacher effectiveness. Teachers acknowledged that their school-based supervisors applied collaborative supervision. A study by Karnati (2019) discovered that teachers viewed the implementation of a collaborative supervisory technique as a way

to enhance their professional competence favourably. In this, supervisees feel more comfortable sharing challenges, mistakes and learning needs, which promotes authentic growth and reduces fear of judgement.

Additionally, Wiyono and Rasyad (2021) discovered that a few supervisors in Indonesia did not engage in a collaborative approach to supervision. This implies that a majority engaged in collaborative supervision because it is rooted in mutual respect, which enhances team cohesion and morale. Thus, when employees feel involved and heard, they tend to perform better and are more motivated to meet instructional goals. A study conducted by Mugisha et al. (2023) in Ilala municipality, Tanzania, revealed a successful application of collaborative supervision. The prevalent collaborative practices employed to enhance teachers' professional knowledge and skills included coaching, teaming and mentoring. However, the findings of the current study indicate that collaborative supervision was applied at a low level. This implies that most teachers do not get the opportunity to learn from their supervisors and vice versa, thus limiting a more dynamic and engaging supervision experience that comes with collaborative supervision.

Similar findings by Strieker et al. (2016) found that more than half of the evidence documented the use of a non-directive supervision approach, as opposed to less than half of the evidence that documented the use of collaborative and directive approaches. Research in Rukungiri district, Uganda, also found that supervisors applied collaborative supervision in secondary schools with positive results. Wakasa (2023) conducted a study in Kakamega county and found a positive relationship between supervisory

knowledge and skills and teacher effectiveness. This implies that when supervisees are actively involved in decision-making and problem-solving, they learn to critically assess situations, rather than just follow orders. Tayebwa (2022) indicated that school-based supervisors applied collaborative supervision practices such as mentorship and collaborative teaching. These forms of supervision and teacher support were positively associated with teacher effectiveness, suggesting a potential benefit of collaborative supervision. This implies that head teachers in secondary schools in Greater should improve on the application of collaborative supervision, which is currently minimal, to enhance teacher competence.

From both the current study and previous research, it is evident that the use of collaborative supervision in secondary schools has significant potential to improve teaching quality and support teacher professional development. By fostering cooperation, shared decision-making, and problem-solving between supervisors and teachers, collaborative supervision encourages teachers to engage more actively in reflective practices, adopt innovative instructional strategies, and develop their professional skills.

Despite these benefits, the effectiveness of collaborative supervision is often constrained by several contextual challenges. High workloads among teachers and supervisors limit the time and attention available for meaningful collaboration. Additionally, some supervisors may lack the necessary skills or training to implement collaborative approaches effectively, while inadequate policies and institutional support can hinder sustained efforts toward collaborative practices. To maximize the impact of collaborative supervision, it is essential to focus on building supervisors' capacity through targeted

training, mentorship, and professional development programs. Equally important is cultivating a culture of collaboration within schools, where open communication, trust, and shared responsibility are actively promoted among all stakeholders. Such measures would strengthen the implementation of collaborative supervision, ultimately enhancing teacher competence and the overall quality of education.

The results of this study revealed that school-based supervisors applied non-directive supervision in secondary schools in Greater Arua. However, it was at a low level. Non-directive supervision, as one of the dimensions of instructional supervision, emphasises teacher autonomy and reflective practice. This approach is gaining attention because of its potential in enhancing teacher competence and instructional quality. Head teachers and deputy head teachers who participated in this study acknowledged that they applied non-directive supervision to teachers to enhance their creativity. The participants expressed that they applied non-directive supervision to enable teachers to be more creative and innovative, thus giving them a high level of autonomy.

The findings are in line with the previous studies that found a moderate application of non-directive supervision. Hoque et al. (2020) found that supervisors applied non-directive approaches while supervising teachers. Supervisors applied a collaborative approach with teachers who could solve instructional problems independently. Similarly, Karnati (2019) found that principals implemented the nondirective approach on teachers who expressed high conceptual skills and autonomy during the instructional process. Non-directive supervision fosters trust and mutual respect between supervisor and

teacher, thus reducing power dynamics, making it easier to share ideas and concerns.

Furthermore, in Uganda, Okia et al. (2021) conducted a study on the status of support supervision in primary schools in Teso sub-region. The findings revealed the application of non-directive supervision to enhance the performance of primary school teachers. The study found that the application of mentoring and reflective practice, which are components of non-directive supervision effective in enhancing teacher effectiveness. Similarly, Ntege et al. (2020) in their study on the effect of directive and non-directive inspection in primary schools, found out that the non-directive approach was being applied successfully. The similarity in current research findings and previous studies underscores the need for non-directive supervision in enhancing the quality of teaching and learning in schools.

The previous literature concurs with the findings of this study despite the variation in the findings on the application of the dimensions of instructional supervision. While some studies revealed equal application of all three dimensions: directive, collaborative and non-directive, some studies found either non-application or limited application of the dimensions. The variation in the findings could be attributed to differences in supervisors' philosophical orientations as well as the characteristics of the employees being supervised. Supervisors' beliefs about teaching, learning, and professional development often influence the choice of supervisory approach, with some favoring more structured, directive methods while others prioritize collaboration or autonomy. Similarly, variations in employee characteristics, such as teaching experience, level of competence, motivation, and openness

to feedback, can shape how supervision is implemented and received. For instance, novice teachers may benefit more from directive supervision that provides step-by-step guidance, whereas more experienced teachers may prefer collaborative or non-directive approaches that allow for reflective practice and innovation.

The above contextual differences highlight the need for flexible supervisory models that adapt to both the supervisor's orientation and the professional needs of teachers, ensuring that supervision contributes meaningfully to competence development and improved instructional quality. In addition, contextual variance, such as limited training for supervisors and availability of time and resources, could have affected instructional leaders to effectively implement instructional supervision in their schools.

Therefore, since employee performance is strongly influenced by motivation, the choice of supervisory approach should be contingent upon the environment, situational demands, and the individual characteristics of the teachers involved (Brownless, 2020). A "one-size-fits-all" method may not be effective, as teachers at different stages of their professional development require different forms of guidance and support. For example, novice teachers may benefit more from directive supervision that provides explicit guidance, while experienced teachers may thrive under collaborative or non-directive approaches that promote autonomy, reflection, and innovation.

This perspective is consistent with instructional leadership theory, which emphasizes the role of school leaders in shaping teaching and learning by providing direction, support, and resources tailored to the needs of teachers (Hallinger & Murphy, 1985). Instructional leaders do not simply

impose uniform supervision but adapt their strategies to align with teachers' competence levels, professional goals, and contextual challenges. By exercising flexibility, they are able to foster teacher growth, promote motivation, and enhance instructional quality. From the findings of this study, it is recommended that school-based supervisors in Greater Arua adopt flexible and context-sensitive supervisory strategies grounded in instructional leadership theory. By providing consistent and differentiated instructional supervision, supervisors can create an enabling environment in which teachers are motivated and supported to improve instructional practice, thereby enhancing overall teacher competence and student learning outcomes.

5.1.2 Objective Two: Status of Teacher Competence in Secondary Schools in Greater Arua, Uganda

The purpose of this study was to examine the relationship between instructional supervision and teacher competence in secondary schools within the Greater Arua region of Uganda. Instructional supervision is a critical component of school leadership that directly influences teacher performance, professional development, and ultimately student learning outcomes. By exploring this relationship, the study sought to generate insights that can inform supervisory practices and policies aimed at improving teaching quality.

In line with this purpose, one of the specific objectives of the study was to determine the status of teacher competence in secondary schools in Greater Arua. Establishing this baseline was important because teacher competence encompasses multiple dimensions, including leadership competence, professional learning, assessment competence, and technological

competence, which are all integral to effective teaching. Understanding the extent to which teachers demonstrate strength or face challenges in these areas provided a foundation for interpreting how different supervisory approaches influence their practice.

Furthermore, identifying the status of teacher competence before testing the relationship with supervision ensured that the study accounted for existing variations in teacher skills and practices. For example, a teacher with strong assessment competence may require a different supervisory approach compared to one who struggles with integrating technology into instruction. Thus, establishing the level of competence allowed for a more nuanced analysis of how supervision contributes to professional growth, ensured that recommendations were evidence-based, and highlighted areas where supervision could be strategically targeted to maximize its impact. To generate data, head teachers and deputy head teachers in charge of academics were interviewed. Secondly, four lessons were observed from each of the selected secondary schools in the Greater Arua. Findings revealed various levels of competence that teachers possessed, ranging from low to high competence levels.

5.1.3.1 Status of Leadership Competence in secondary schools in greater Arua, Uganda

Data from surveys reveal that the status of leadership competence was moderate. The result was similar to data collected through classroom observation and interviews. Moreover, findings revealed that secondary teachers exhibit different leadership competence at varying levels. From the results, it is evident that teachers make deliberate efforts to create and

maintain a conducive classroom environment characterized by clear expectations and well-defined standards of behaviour. Such an environment not only minimizes disruptions and promotes discipline but also establishes a foundation for effective teaching and learning. By setting clear behavioural expectations, teachers foster a sense of order, mutual respect, and responsibility among learners, which in turn enhances student engagement and academic performance.

This finding highlights the critical role of classroom management as a component of teacher competence and underscores the importance of ongoing support through instructional supervision to strengthen teachers' ability to sustain positive learning environments. Such findings implied that teachers who create a conducive learning environment facilitate quality interaction between learners and, thus, inspire and motivate learners to ensure their academic accomplishments. A teacher's capability to manage the learning environment and student behaviour is significant in the realisation of positive learning outcomes. In line with the above findings, Ruth and Anyaogu (2016) conclude that a conducive learning environment is a precondition for effective teaching and learning; thus, teachers should ensure a conducive emotional and physical climate during the teaching and learning process.

Moreover, the findings revealed that teachers demonstrated adequate knowledge and skills in managing teaching and learning resources to effectively support student learning. This indicates that instructional resources are being utilized and organized in ways that enhance the teaching–learning process. Such effective management ensures that resources are not

only available but also appropriately applied to meet specific instructional objectives and learner needs. This result aligns with Yara and Otieno (2010), who emphasized the critical role of teaching and learning resources in improving academic performance. When learners have access to adequate and appropriate instructional materials, such as charts, textbooks, models, and realia, the learning experience becomes more concrete, engaging, and meaningful.

The implication of this finding is that teachers' ability to manage instructional resources contributes significantly to creating interactive and student-centered classrooms. Properly managed resources also help bridge the gap between theory and practice by providing tangible references that simplify abstract concepts. In contexts such as Greater Arua, where resource constraints are common, the efficient use and improvisation of available materials become even more essential in promoting equity and enhancing student achievement.

Meanwhile, the study respondents agreed that they encourage students to take responsibility for their own behaviour. This suggests that teachers in secondary schools in Greater Arua actively promote learner accountability and self-regulation as part of classroom management. Such practices are vital in shaping students' character, fostering independence, and cultivating a sense of ownership over their learning journey. This finding resonates with Kazlauskienė et al. (2021), who observed that when teachers involve learners in the teaching–learning process through collegial negotiation, shared decision-making, and opportunities to select preferred learning strategies,

students feel valued, cared for, and intrinsically motivated to engage in learning.

The implication of this finding is that by encouraging students to assume responsibility for their behaviour, teachers not only reduce disciplinary challenges but also foster essential life skills such as self-discipline, accountability, and critical decision-making. These competencies extend beyond the classroom, preparing students for responsible citizenship and lifelong learning. Moreover, when learners perceive that teachers trust them to make responsible choices, it strengthens teacher–student relationships, enhances classroom harmony, and contributes to improved academic outcomes..

However, this finding contrasts with the observations of Cook-sather et al (2010), who reported that many teachers did not involve students in taking responsibility for their behaviour within the teaching–learning process. This contrast points to variation in teacher competence levels. Teachers who are more competent tend to recognize the value of learner agency, creating opportunities for students to make choices, take responsibility, and actively contribute to the learning process. In contrast, teachers with lower competence may rely on more teacher-centred approaches that restrict learner participation and emphasize compliance over autonomy.

This implies that teacher competence directly influences the extent to which students are empowered to assume responsibility for their behaviour. Competent teachers are better positioned to balance authority with learner autonomy, integrating strategies that foster accountability, motivation, and self-regulation. Conversely, less competent teachers may unintentionally

inhibit these qualities by limiting student involvement, thereby affecting both classroom climate and overall instructional quality. Therefore, while the findings from Greater Arua schools reflect positive progress, the contrast with Cook-Sather et al. (2010) underscores the importance of strengthening teacher competence through continuous professional development. This would enable more teachers to create learner-centred environments that support responsibility, engagement, and improved learning outcomes.

Furthermore, the majority of the teachers indicated that they use praise to foster students' self-esteem. In support of this, head teachers confirmed during interviews that teachers motivate learners by thanking them and make fellow learners clap for them when they answer questions in class. Hence, this implies that praising is commonly used by teachers to foster or increase students' self-esteem. This is in line with the study by Rehman Ghazi et al. (2016) on students' perceptions of how male and female teachers create opportunities to build their self-esteem. The study found that as much as teachers were found to support building students' self-esteem, female teachers were effective as compared to their male counterparts in building students' self-esteem.

A large number of the study respondents also acknowledged that they facilitate student ownership of classroom procedures. This meant that teachers in Greater Arua always facilitated student ownership of classroom procedures. The previous study by Brewer et al. (2007) confirmed that lecturers used learning contracts as a strategy to ensure students' ownership of the classroom procedures. Facilitating student ownership of the classroom

procedures enables them to be aware of the learning outcomes and the requirements to achieve them.

Finally, the results indicate that teachers applied positive management techniques to respond to inappropriate behaviour, suggesting a shift towards proactive and constructive classroom management practices. This implies that teachers in the surveyed secondary schools actively seek to guide students towards appropriate behaviour rather than relying solely on punitive measures. Supporting this finding, Ahmed (2020) observed that teachers employ various models to nurture positive discipline, emphasizing strategies that promote self-regulation, responsibility, and respectful interactions among students.

As Amoah (2016) notes, it is imperative for teachers to adopt a paradigm shift from punitive approaches to preventive, positive, and proactive measures that reinforce desired behaviours. Such techniques ranging from verbal praise, constructive feedback, and structured classroom routines to collaborative problem-solving with students, help create a supportive learning environment that motivates learners and reduces behavioural disruptions. The implication of these findings is that positive management techniques not only enhance student behaviour but also contribute to improved classroom climate, greater teacher efficacy, and higher levels of student engagement and academic achievement. Encouraging teachers to consistently apply such strategies aligns with broader educational goals of fostering learner-centred environments and promoting holistic student development.

The above findings are testimonies that teachers possess leadership competence that enables them to perform within the job expectations. This is in line with Roelofs (2007), who states that a teacher should possess organisational competence. This is the ability to create an orderly, on-task climate in their classrooms. It is the teacher's responsibility to create an inclusive learning environment to cater for the needs and interests of girls and boys as well as learners with special needs. Thus, knowledge of students' characteristics and the skill of handling students' discipline is a pertinent competence that a teacher should possess.

Additionally, Mandal (2018) asserts that teachers exhibit leadership competence within the school context by actively participating in collaborative and collegial professional learning activities. This involves engaging with colleagues to share knowledge, discuss instructional strategies, and collectively address challenges in teaching and learning. Furthermore, teachers demonstrate leadership competence by effectively utilizing relevant data to identify areas that require improvement, thereby informing the development of evidence-based school improvement plans.

The implication of this finding is that teacher leadership goes beyond classroom instruction; it encompasses the ability to contribute to the broader educational goals of the school. By engaging in professional learning communities and using data-driven decision-making, teachers not only enhance their own professional growth but also support the overall development of the school. This practice fosters a culture of continuous improvement, strengthens instructional quality, and ensures that interventions

are targeted toward areas of greatest need, ultimately benefiting both teachers and students.

5.1.3.2 Status of Professional Learning Competence in secondary schools in greater Arua, Uganda

The study aimed to establish the status of teacher professional learning competence in secondary schools in Greater Arua, Uganda. Teacher professional learning competence was measured through reflection, feedback, goal setting, collaboration and use of research, among others.

The survey findings which was supported by interview results indicated that teachers exhibited a moderate level of professional learning competence in secondary schools in greater Arua, Uganda. Specifically, it is evident from the study that teachers regularly reflect on a wide range of actions for ongoing professional growth. This, hence, implies that teachers should base their teaching on ongoing professional growth to achieve competency. The importance of reflective practice in ensuring high teaching standards cannot be underestimated, as it encourages teachers to examine their instructional challenges and how to deal with them.

A study by Lamb (2017) revealed that teachers exhibited reflective practice by nurturing a classroom climate where learners were allowed to express themselves freely. Similarly, Carlson (2019) found that novice teachers engaged in reflective practice, which led to informative learning. Moreover, the study conducted by MacPhail et al. (2019) highlighted a range of dimensions of reflective practice that teachers actively engage in. These include self-initiated professional development, collaboration with peers and colleagues, seeking opportunities to enhance instructional practices, engaging

in research, and pursuing further development of research skills. Reflective practice enables teachers to critically examine their own teaching strategies, identify areas for improvement, and implement changes that enhance student learning outcomes.

The implication of these findings is that teachers who consistently engage in reflective practice are better positioned to adapt to evolving educational demands, adopt evidence-based instructional methods, and foster professional growth. By combining self-directed learning with collaborative engagement and research-informed practice, teachers not only strengthen their own competence but also contribute to a culture of continuous improvement within their schools. This underscores the importance of supporting teachers through structured professional development opportunities and supervision that encourages reflective thinking, peer collaboration, and the application of innovative teaching strategies.

On obtaining feedback from a variety of sources for prompt reflection and action, teachers indicated high competence. This finding meant that teachers get feedback from a number of sources for prompt reflection and action. Feedback is essential in that it helps teachers to understand their strengths and areas that may require improvement. As noted by Lamb (2017) in the study conducted on how feedback influences teachers' reflective practice, the research participants acknowledged that teachers were able to reflect on their practice because of feedback from their colleagues and senior managers. However, a section of teachers from this study confessed that they did not get feedback from a variety of sources. Lamb (2017) also noted this scenario, which found that teachers did not allow learners to evaluate their

lessons. This implies that some teachers are not receptive to criticisms from not only learners but also their colleagues and senior managers.

On establishing professional development goal, most of the study respondents, noted that they establish goals for their professional development. Through setting personal and professional development goals, teachers are able to learn from personal experience and develop problem-solving skills which will elicit discussions with peers. Continuous Professional Development (CPD) increases teacher integrity and competence to achieve instructional goals (Kruger & Pienaar, 2020). It also ensures that individuals are up to date with industry change by constantly updating their skill set and filling in gaps in competence and knowledge.

However, it should be noted that a more significant portion of teacher acknowledged that they do not establish their professional goals. This deficiency was also revealed by the head teachers during interviews that some teachers wait for their supervisors to tell them what to do. It appears that most head teachers establish and impose their professional development goals on their teachers. This was stressed in the study, which states that most educators perceive professional development as a top-down activity meant to satisfy the needs of supervisors and top managers. Similarly, Duran et al. (2020) observed in their study that teachers were not initiating and developing their professional development plans. Körkkö et al. (2022) further found out that a teacher's engagement in the development of a professional development plan was affected by the teacher's personal experience and academic qualifications. There is, therefore, a greater need to encourage

individual teachers to initiate professional development in order to enhance their professional knowledge, skills and attitudes.

A more significant portion of teachers acknowledged that they use classroom observation data as a source of ongoing professional development. This implies that teachers in the study rely on classroom data to decide their professional development engagements. The modern perspective on teacher professional learning through classroom data informs the teacher of their strength and areas of improvement. Grimm et al. (2014) opined that through data-driven classroom observation, teachers are able to engage with colleagues in collecting and interpreting data that depicts individual teachers' classroom contexts. The findings confirmed by Ing (2010) that for teachers to use classroom observation for professional growth, then there should be variability in the implementation of classroom observation.

Engagement with colleagues through dialogue empowers teachers with dynamic classroom processes that enable them to refine their instructions and how to deal with diverse learners. Indeed, the results of this study revealed that a majority of teachers acknowledged actively engaging in dialogue with their colleagues on professional issues. This finding supports the notion that consulting and collaborating with fellow teachers on instructional and professional matters contributes significantly to the enhancement of classroom practices. There is evidence of collaboration, as expressed by most of the teachers, that they collaborate with other professionals to generate new ideas. These findings suggested that teachers in the Greater Arua secondary schools collaborate with other professionals to generate new ideas. Through such interactions, teachers are able to share

ideas, discuss challenges, exchange best practices, and collaboratively problem-solve, which fosters professional growth and continuous improvement in teaching quality.

The implication is that professional dialogue and collegial collaboration serve as key mechanisms for strengthening teacher competence. By engaging in these discussions, teachers not only gain new insights and strategies for effective instruction but also build supportive professional networks that enhance reflective practice and innovation in the classroom. Consequently, schools that encourage structured opportunities for teacher collaboration are more likely to experience improvements in instructional quality, student engagement, and overall learning outcomes.

Professional development involve a number of activities such as meetings, workshops and seminars. On their involvememnt in these activities, teachers recognize their participation in recommended activities for professional learning and development. This suggested that teachers in the Greater Arua participate in recommended professional learning activities and activities. Hence, this shows that teachers engage in professional learning activities that empower them with job skills. Guskey (2014) supports the engagement in professional learning strategies such as Action research projects, organized study groups, collegial exchanges, professional learning communities, online services, and a wide range of other group and individual activities that are effective, depending on our identified goals for student learning.

Lastly, on involvement in applied research such as action research, most of the teachers did not acknowledge the application of a variety of

research-verified approaches to improve teaching and learning. These worrying results implied that teachers in Greater Arua were not using research-verified data to improve their teaching. Teachers' lack of application of data-based decisions to improve practice hamper student's academic performance.

A study conducted by Malunda et al. (2016) concluded that poor student performance in secondary schools in Uganda and specifically West Nile was a result of teacher's use of traditional methods of teaching. Most teachers in Greater Arua do not conduct action research to update their professional knowledge and skills. There is evidence that teachers' involvement in research enables them to analyse student learning outcomes critically. This was stressed by Darling-Hammond (2016), who asserts that their involvement in assessing their work and that of their students enabled them to evaluate the effectiveness of their practice, thus prompting them to adopt new instructional strategies that address individual student challenges. Hence, this implied that teachers had agreed that a variety of research-verified approaches could be used to improve teaching and learning.

Overall teachers exhibited moderate level in professional learning competence. This is in line with previous research that positions professional learning at the centre of every teacher's efforts to improve practice (Thoonen et al., 2011; European Commission, 2013; Niemi et al., 2016). Additionally, a teacher should possess competence in cooperating with colleagues, reflection, and development. Similarly, Thi et al. (2023) found out in their study on teacher competence in Vietnam that teachers' ability to collaborate with others is developed through peer reflection on the tasks they perform as a

team. Relatedly, the European Commission's report on the Common European Principles for Teacher Competences and Qualifications, released in 2005, proposed that a comprehensive teacher competence framework should encompass several key dimensions. These include the ability to work collaboratively with others, effectively engage with knowledge, technology, and information, and actively interact with society (Ergünay & Parsons, 2022). The report emphasizes that teacher competence extends beyond subject-matter expertise to include interpersonal, technological, and societal engagement skills that are critical for fostering holistic student development and promoting effective learning environments.

The implication of this framework for the present study is significant. It underscores the importance of integrating collaboration, reflective practice, and the effective use of instructional resources including ICT, into the assessment of teacher competence. Teachers who develop skills across these dimensions are better equipped to meet the diverse needs of learners, contribute to school improvement initiatives, and engage meaningfully with the wider community. Consequently, this perspective reinforces the need for instructional supervision to not only focus on pedagogical techniques but also to support the broader development of professional competencies that align with international standards for effective teaching.

In summary, professional learning promotes the sharing of ideas, leading to improved teaching and learning. Professional learning further enhances the desirable characteristics of an ideal teacher. Therefore, teachers should possess collaborative and networking skills to teach diverse learners using different techniques and materials. It is recommended that educational

leaders and managers should intensify school-based professional learning through instructional supervision, workshops/seminars, mentorship, and peer coaching for improved learning outcomes.

5.1.3.3 Status of Assessment Competence in secondary schools in greater Arua, Uganda

Teachers are expected to possess the knowledge, skills, and attitudes required to conduct assessments in order to receive continuous feedback that can enhance student learning. Findings on the status of the assessment show that secondary teachers in Greater Arua demonstrate a high level of assessment competence except in the use of ICT in assessment. Previous studies concur that assessment is one of the critical competence a teacher should possess. Ergünay and Parsons (2022) found out that assessment competence is critical to the teachers of the USA and Türkiye. In the same vein, Scardamalia (2014) states that a teacher should possess skills and knowledge in designing assessment tasks with specific purposes and uses. Therefore, a competent teacher conducts an assessment of his/her learners regularly using relevant criteria as stipulated in the assessment policy. Secondly, he/she provides timely and objective feedback in the teaching- learning process. Feedback helps both teachers and learners. For example, assessment informs the student of their progress, observes learning needs for improvement and motivates the learners to participate in appropriate learning activities, among others.

With regard to aligning assessment tasks with planned learning outcomes, the majority of the study respondents indicated that they consciously relate assessment activities to the specific objectives of their

lessons, with only a small proportion deviating from this practice. This finding suggests that most teachers in the surveyed secondary schools recognize the importance of ensuring that assessments are purposeful, relevant, and directly tied to the intended learning outcomes. By doing so, teachers are able to more accurately measure student understanding, identify gaps in knowledge, and provide targeted feedback to support learning.

The implication of this practice is that when assessments are carefully aligned with learning outcomes, students are more likely to engage with the material in a meaningful way, and instructional decisions can be better informed. Additionally, it highlights the role of teacher competence in assessment planning as a critical factor in enhancing instructional effectiveness. Teachers who consistently align assessments with learning goals are better able to monitor progress, adjust instructional strategies, and support student achievement, ultimately contributing to improved learning outcomes and educational quality in secondary schools.. Linking assessment tasks to instructional goals enables a teacher to nurture the students' creativity and, thus, inspire them to be lifelong learners. Similarly, Wolterinck et al. (2022) argue that for teachers to understand the strategies for linking assessment tasks to learning outcomes, a teacher must know the various forms of assessment.

The study also found that the teachers used purposeful assessment of tasks that were integrated across sequence learning experiences. This implies that teachers in secondary schools in the Greater Arua continuously assess students to determine their strengths as well as their needs and capabilities. Through purposeful assessment, teachers publicly point to students' different

strengths and accomplishments, thus creating opportunities for student academic achievement (Darling-Hammond, 2016).

Similar to the above, study findings revealed that most teachers designed assessment tasks that included all students and allowed them to demonstrate achievements in a variety of ways. This implies that inclusiveness is considered when designing assessment tasks, which allows students to demonstrate achievement in their academic engagements. This is contrary to the results of the literature review conducted by Tai et al. (2021), who found out that few studies revealed that teachers designed inclusive assessment tasks. The authors further noted that, according to much of the existing literature, both teachers and students generally hold positive perceptions regarding the importance of designing assessment tasks that are inclusive of all learners.

Inclusive assessment practices and constructive feedback are critical components of the teaching–learning process because they ensure that the diverse abilities, learning styles, and needs of all students are recognized and valued. As highlighted by Wolterinck, et al. (2022), inclusive assessment and feedback are essential for promoting equity in education and for enabling every student to demonstrate their learning in meaningful ways. Similarly, Giacomazzi (2021) found in the study that teachers valued assessment at the Uganda Certificate of Education (UCE) as a means to enable them to refocus their pedagogical practices in nurturing student’s thinking skills.

The implication of this finding is that teachers who implement inclusive assessment strategies not only foster fairness and accessibility in the classroom but also support deeper engagement and motivation among

learners. By providing varied assessment opportunities and tailored feedback, teachers can identify individual strengths and areas for improvement, thereby facilitating personalized learning. Ultimately, this approach contributes to higher student achievement, encourages a sense of belonging, and promotes an inclusive school culture that respects and nurtures learner diversity.

On the use of ICT for assessment, the majority of teachers indicated that they did not integrate ICT to enrich their assessment tasks. In the recent past, scholars have recognised the importance of ICT integration in the teaching-learning process, including lesson planning, delivery and assessment of instructions. Nevertheless, little success has been realised in secondary schools in rural areas (Guma et al., 2013). Results from the current study show that most teachers disagreed with the inclusion of ICT-enriched assessment tasks, except for only who recognised the importance of inclusivity when integrating ICT in teaching. This means that ICT is not widely used as a tool when assessing students in secondary schools in the Greater Arua. The inability of teachers to integrate ICT in their assessment limits their ability to assess time, deliver, and provide timely feedback to the students. Majid (2020) acknowledges the importance of ICT devices and tools in enhancing teachers' role in designing test items, scoring and providing feedback to students. Therefore, teachers need to strengthen their commitment to using ICT devices and tools to improve the quality of assessment and assessment feedback.

High-quality feedback is one single factor that determines student academic progress. Results from the current study confirmed that the majority of teachers reported providing students with constructive feedback

on their performance within an appropriate time frame. This indicates that teachers recognize the importance of timely feedback in guiding student learning, reinforcing strengths, and addressing areas that require improvement. Prompt and constructive feedback allows learners to reflect on their progress, adjust their learning strategies, and remain motivated to achieve the intended learning outcomes. This implied that teachers know the benefit of providing constructive feedback within an appropriate time frame.

Effective feedback should be fair and objective and should be able to show clearly performance gaps and how they can be addressed (Lizzio & Wilson, 2008). Feedback is essential in learning because it enables the student to develop academic knowledge, skills and understanding, especially if both teachers and students valued constructive two-way feedback. Additionally, Lizzio and Wilson (2008) discovered that students preferred development and emotionally encouraging feedback to evaluative feedback. From the findings above, it can be concluded that constructive feedback contributes to students' understanding of their strengths and weaknesses as well as motivating them to attain good grades.

In connection to the above, most of the study respondents indicated that they encouraged student peer reflection where appropriate. Hence, it is suggested that peer reflection is essential in forging a way forward for effective teaching and learning. This is in line with the findings of Beaumont et al. (2011), who found that students reported participation in peer marking and feedback. Similarly, the majority of the study respondents, acknowledged conducting assessment as per the policy guidelines. This shows that there was

an agreement to assess following recommended assessment policies in the Greater Arua.

In Uganda, the National Examination Board (UNEB) is responsible for national summative assessment as mandated by the Act of parliament (CEES & GESCI, 2022). The UNEB and Uganda National Curriculum Development Centre (NCDC) oversee the assessment policy that recommends that students should be assessed daily, at the end of the topic and end of the term so, to gauge students' learning progress (Akello & Timmerman, 2018). Besides periodic assessment, teachers are also mandated by policy to mark learners' assessment tasks and provide immediate feedback that spells out areas of strength and areas of improvement.

However, the study revealed that some teachers did not conduct assessments in line with the national assessment policy. This corroborates with findings from a survey conducted by CEES and GESCI (2022), which exposed that much as the Uganda national assessment policy spells out the conduct of and use of assessment data, teachers revealed being overwhelmed with handling large classes and, thus, concentrate on summative assessment at the expense of formative assessment, used to diagnose learning challenges. The study further revealed several challenges affecting assessment in Uganda, such as high-stakes assessment, which focuses on accountability and grades, limited capacity to utilise assessment data, limited resources and low attitudes of education stakeholders towards formative assessment. Lack of adherence to assessment policy could also be a factor, among other factors, behind the low-quality education, especially during the Universal Secondary Education (USE) era (Otyola et al., 2022). Across all secondary schools in

Uganda, there seems to be more emphasis on assessment for placement and promotion than on assessing competence, values and life skills possessed by the learners. A significant factor could be inadequate skills in conducting assessments for learning.

Finally, a majority of teachers acknowledged keeping a record of student learning outcomes accurately and consistently. This implied that teachers who kept records of student learning outcomes knew the importance of accurate record management. A related study in both private and public secondary schools in Uganda by Muhammad et al. (2022) revealed that teachers managed examination records well. The study discovered that secondary schools kept records of previous candidates and their performance, test results and examination results. Effective records management ensures efficiency, maximization of space and effective retrieval of information.

In conclusion, both qualitative and quantitative findings suggested that teachers in secondary schools in the Greater Arua had required assessment competence. This implies that teachers value assessment in helping them explore learning challenges and provide immediate solutions to the instructional challenges expert teachers by both teachers and learners. It also enables the teacher to understand the student's level of attention. Thus, through formative assessment, the teacher reviews the lesson to gauge the understanding of the learners as well as to diagnose learning challenges as a way of addressing the gaps.

5.1.3.4 Status of Technological Competence in secondary schools in greater Arua, Uganda

This section was aimed at assessing teacher's competence in designing and using both traditional and modern technologies in the teaching-learning process. Traditional technologies characterize the use of physical resources. In contrast, modern technologies are characterized by the use of computers and other ICT tools.

The Government of Uganda developed and formally approved the National Information and Communication Technology (ICT) Policy in 2014, with the overarching aim of supporting the achievement of Sustainable Development Goal (SDG) 4, which emphasizes quality education and lifelong learning (Farrell, 2007; Muweesi et al., 2021). The policy provides a strategic framework for integrating ICT into all levels of education, promoting digital literacy among teachers and learners, and enhancing access to educational resources and learning opportunities. The implication of this policy is that effective implementation of ICT in schools can transform teaching and learning by making it more interactive, inclusive, and learner-centered. By equipping teachers with the skills and tools to leverage technology, the policy seeks to improve instructional quality, facilitate innovative pedagogical approaches, and ensure that students acquire the digital competencies necessary for the 21st century. Furthermore, aligning teacher professional development and school practices with this national ICT framework is essential for realizing the broader goals of equitable, high-quality education in Uganda.

The findings from the current study revealed that a majority of the study teachers did not encourage students to use appropriate ICT tools to enhance critical thinking. This implies that teachers in Greater Arua do not bother emphasizing students' use of ICT tools, and this is a reason for the digital divide between rural and urban schools (Lating, 2009). Lating (2009) revealed that teachers in Greater Arua possessed little ICT skills. Similarly, a study done by Wamala and Seruwagi (2012) found that teachers demonstrated low competence and suggested that teacher competence be increased to improve the academic achievement of students. This evidence is in line with Busulwa and Bbuye's (2018) findings that secondary teachers, especially female teachers in Uganda, exhibit a low participation rate in ICT usage. Relatedly, Kule (2021) found that teachers reported low competence in the use of ICT. The findings were supported by Ndawula et al. (2013) study, which found that most secondary school teachers did not undergo ICT teacher training courses and, thus, lacked pedagogical techniques to teach Computer Studies as a subject.

This implies that teachers who do not possess ICT competence hardly encourage students to use ICT tools in the teaching-learning process. As posited by Guma et al. (2013), several factors influence ICT integration. These include teachers' background, gender, self-efficacy, teaching experience, computer motivation, computer attitudes, perceptions of ICT-related school policies, teachers' educational beliefs, and professional development, among others.

Contrarily, a study by Mwawasi (2014) conducted in a public school in Kenya found that teachers were effectively integrating ICT into the

teaching–learning process. This success was largely attributed to the strong emphasis placed on teachers’ application of ICT knowledge and skills during instruction. In addition, the findings highlighted that school leaders in Kenya organized regular school-based professional development and provided ongoing supervision of teaching practices, ensuring that ICT integration was consistently monitored and supported. These findings underscore the reality of the digital divide between countries, demonstrating that the availability of ICT tools, coupled with systematic professional development and supervisory support, is critical for successful ICT integration in classrooms. Secondly, while some countries emphasise technology integration to enhance learning, some still lag behind. For all citizens, including teachers, to be ICT literate, the study recommends that teachers should be encouraged to embrace the usage of ICT to foster learning irrespective of place and time, as a move to develop a knowledge society.

The implication for contexts like Uganda, including Greater Arua, is that merely having an ICT policy is insufficient. Effective implementation requires equipping teachers with practical ICT skills, providing structured professional development, and ensuring regular supervisory support to guide instructional practices. Without such mechanisms, teachers may struggle to leverage technology effectively, limiting the potential benefits of ICT for enhancing teaching quality, learner engagement, and educational outcomes.

The encouragement of students to use appropriate instructional resources, such as charts and audio-video aids, to enhance critical thinking was widely accepted by teachers. This, hence, suggested that respondents see the value in using appropriate traditional resources. Similarly, qualitative

findings revealed that teachers were knowledgeable in the use of traditional materials to support teaching and learning. This is in line with Atieno's (2014) findings that teaching learning materials such as charts, dusters, and chalkboards were available and used by teachers. Similarly, a large number of the study respondents, admitted the utilization of the whole school as an environment enhances student learning. This implies that in the implementation of the current Lower secondary curriculum, teachers should be encouraged to design low-cost instructional materials from the local environment.

Regarding access to ICT resources, the study found that a significant proportion of teachers reported difficulties in managing ICT resources in a manner that is inclusive for all students. This suggests that while some ICT tools may be available, teachers face challenges in ensuring equitable access, particularly for students with varying abilities, learning needs, or limited prior exposure to technology. The inability to provide inclusive access may limit students' opportunities to engage fully with digital learning activities, potentially exacerbating existing disparities in learning outcomes. The implication of this finding is that enhancing technological competence among teachers is critical not only for effective ICT integration but also for promoting equity in the classroom. School administrators and instructional supervisors should provide targeted training and support to help teachers manage ICT resources inclusively, implement adaptive strategies for diverse learners, and create opportunities for all students to benefit from digital learning. By addressing these gaps, schools can foster a more inclusive and

interactive learning environment, thereby improving overall student engagement, learning outcomes, and preparedness for the digital age.

Orakova et al., (2024) findings indicate that primary school teachers in Kazakhstan possess moderate levels of digital literacy and technological competence, with gender and professional seniority influencing these competence. Similarly, Demeshkant, (2020) reveals that PhD students, as future academic teachers, show varying levels of digital competence based on their field of study, with engineering students scoring highest in technological skills. Contradictorily, Huang et al., (2021) highlight a deficiency in teachers' ICT knowledge and a reluctance to apply it, suggesting a need for ongoing in-service training to improve digital competence. Atmojo et al. (2022) case study also reveals a varying range of digital literacy among teachers, from very low to high, with many falling into the lower categories. Accordingly, while there is evidence of initiatives to enhance teachers' technological competence, the actual levels of competence vary widely. This variation is influenced by factors such as discipline, gender, professional experience, and the availability of targeted training programs. The studies collectively underscore the importance of continuous professional development in technological competence for teachers to meet the demands of digital-native students and the evolving educational landscape.

Results from interview also reveal that most teachers do not integrate ICT in teaching. This was confirmed from the lesson observation data where most of the observed teachers exhibited unsatisfactory level of ICT competence. This hence suggests that teachers in the Greater Arua encourage inclusive ICTs. This finding is in agreement with Namae (2020) that

inadequate skills and lack of ICT resources hampered their ICT usage. The study by Edison and Kasujja (2020) added that inadequate resources affect teachers' ability to integrate ICT during the teaching-learning process. Therefore, the study recommends that education stakeholders engage in ICT resource mobilization and train teachers on the design and use of ICT teaching resources. Contrarily, most teachers noted that they manage to access physical resources that are inclusive to all students to facilitate the achievement outcomes. This implied that teachers indeed manage access to physical resources that are inclusive to all students to allow them to achieve outcomes. These findings, however, contradict Atieno (2014), who found that most of the teachers' performance was affected by inadequate skills and knowledge in the management of physical resources such as classroom space, desks and laboratories.

The study further revealed that most respondents reported not providing students with opportunities to use ICT for a variety of learning purposes. Similarly, a majority of teachers did not adjust the use of ICT to accommodate the diverse learning needs of their students, indicating challenges in making digital learning inclusive and adaptable. Interviews with head teachers and deputy head teachers corroborated these findings, revealing that many teachers exhibited low competence in integrating ICT effectively into the teaching-learning process. These results align with previous studies, which have highlighted that teacher proficiency in ICT integration is often limited by gaps in skills, training, and experience.

The implication is that low technological competence can hinder the potential benefits of ICT, including fostering student engagement, promoting

individualized learning, and supporting innovative teaching strategies. To address this challenge, school administrators and instructional supervisors should prioritize targeted professional development, provide hands-on support for teachers, and implement strategies that encourage the inclusive and versatile use of ICT in classrooms. Enhancing teachers' technological skills is essential for improving instructional quality, promoting digital literacy among students, and narrowing the digital divide in schools. A study by Nessipbayeva (2012) on the competence of a modern teacher concurred with the above findings when they found that competent teachers display their awareness of technology's potential to enhance learning by integrating technology into their instruction to enhance student learning outcomes.

Relatedly, the European Commission's report on the Common European Principles for Teacher Competences and Qualifications, released in 2005, provided a comprehensive framework for defining teacher competence. According to Ergünay and Parsons (2022), the framework emphasizes four key areas: the ability to work collaboratively with others, effectively engage with knowledge, technology, and information, and actively participate in and contribute to society. This framework highlights that teacher competence is multidimensional, extending beyond subject knowledge to include interpersonal, technological, and societal engagement skills, all of which are critical for fostering effective teaching and holistic student development. Thus, a competent teacher should have skills in integrating ICT into their teaching, especially now that Uganda is implementing the revised lower secondary curriculum.

The framework underscores the importance of equipping teachers not only with instructional skills but also with collaborative, reflective, and technological competencies. Aligning teacher development and supervision practices with these internationally recognized standards can enhance professional growth, promote inclusive and effective classroom practices, and ensure that teachers are prepared to meet the diverse needs of learners. Moreover, it reinforces the role of instructional supervision in supporting teachers to develop these competencies systematically, ensuring both improved teaching quality and better learning outcomes.

From the above submissions by the study participants and supported by previous studies, it can be concluded that technological competence is vital in the teaching-learning process. Therefore, a competent teacher selects and uses learning aids appropriately during the teaching-learning process. He/she also makes good use of locally available teaching-learning materials from the school and surrounding environment in teaching various content of his/her discipline. Thus, school administrators should encourage the use ICT as well traditional resources to reinforce learning and high student learning outcomes.

5.1.4 Objective Three: The Relationship Between Directive Supervision and Teacher competence in Secondary Schools in Greater Arua

The third objective of the study was to examine the relationship between directive supervision and teacher competence in secondary schools in Greater Arua. The study initially hypothesized that there was no significant relationship between directive supervision and teacher competence. However, the findings revealed that directive supervision had a positive and statistically significant relationship with teacher competence in the study area. Consequently, the null hypothesis (H_0), which stated that there is no statistically significant positive relationship between directive supervision and teacher competence, was rejected. The alternative hypothesis (H_1), which posits that a statistically significant positive relationship exists, was therefore accepted. This suggests that providing direct guidance and structured support to teachers enhances their competence in executing instructional responsibilities effectively.

Directive supervision is primarily used to support new teachers or those requiring additional assistance in improving their instructional practice. During supervisory conferencing, the supervisor provides clear guidance on areas of instructional improvement, makes the final decisions on strategies to address teaching challenges, and directs teachers on how to implement these strategies under direct observation or through delegated senior teachers (Ibrahim, 2018). This structured approach ensures that teachers receive explicit instructions and exemplars that help them enhance their teaching methods and classroom management techniques.

The findings align with previous studies. Hoque et al. (2020) found a positive relationship between directive supervision and teacher performance in Kuala Lumpur, indicating that in certain contexts or with specific teacher needs, a directive approach can effectively boost instructional competence. Similarly, Akinfolarin (2017) linked improved student academic performance to the directive nature of supervision provided to teachers. From a behaviorist perspective, supervisors are expected to guide, direct, and model appropriate instructional practices for teachers to emulate (Wiyono & Rasyad, 2021). Ampofo et al. (2019) further demonstrated that direct supervision by school heads, especially in lesson planning and delivery, significantly enhances teacher competence and overall performance.

The implications of these findings are substantial. Directive supervision helps teachers acquire the skills and knowledge required for effective lesson delivery, classroom management, and assessment practices. It provides a structured learning environment for teachers who may lack experience or confidence, ensuring consistency in instructional quality. However, while directive supervision is beneficial for immediate competence improvement, overreliance on this approach may limit teachers' opportunities for autonomous decision-making and professional creativity. Therefore, school-based supervisors should balance directive strategies with collaborative and non-directive approaches, tailoring supervision to individual teacher needs to foster both competence and professional growth.

Directive supervision appears to be a significant factor in enhancing teacher competence. Appiah (2018) states that directive informative supervision style is predominantly utilised to guide expert teachers as they

develop professionally and assertively in their teaching methods, classroom management, and evaluation of students. According to the findings of Edgar et al. (2022), directive supervision practices by close-to-school education officers in Tanzanian public secondary schools have contributed positively to teacher competence as reflected in their job performance. This suggests that a clear and authoritative approach can be effective in certain educational contexts. However, the study also notes that while directive supervision was effective, the inclusion of supportive and participative supervision strategies could further enhance teacher performance, suggesting a potential synergy between different supervisory approaches. The study findings are also related to the previous study conducted by Tang et al. (2021) in secondary schools in Tanzania. The study found a significantly positive relationship between directive supervision and teacher effectiveness.

In Uganda, the effectiveness of directive supervision in enhancing has been a subject of concern. Malunda, et al. (2016) conducted a study in secondary schools to establish the relationship between instructional supervision and teacher pedagogical practices and found that directive supervision had a significantly positive relation with teacher pedagogical practices. Directive supervisory practices, such as classroom observation and portfolio reviews, were found to improve teachers' pedagogical practices. This was confirmed by the participants of this study during interviews that the data from lesson observation helps them to guide the teachers on classroom management techniques. This is in line with the objectives of directive supervision, which aims at helping the teacher to improve instructional effectiveness through constant monitoring and deliberate

feedback. Similarly, Kule et al. (2024) found a positive relationship between directive supervision and teacher effectiveness, suggesting that directive supervision, when properly carried out, can lead to increased teacher competence and high student learning outcomes. In addition, Muranda (2018) found similar findings that directive supervision positively correlates with teacher performance, highlighting the importance of structured supervisory approaches.

Studies on the application of directive support during pre-observation and post-observation were found to influence teacher competence in lesson planning and delivery. A cross-sectional survey of 14 secondary schools in Mukono district found that supervisors who used directive supervision, focused on observations and corrections, improved teacher's competence on lesson planning and instruction (Nabwire, 2014). Relatedly, a study on the influence of supervision of teaching activities on teacher performance in government-aided secondary schools in Moyo District, Northern Uganda, revealed that directive supervision positively influenced teachers' knowledge and skills in planning, delivery and assessment (Oryema, 2017). The study revealed that when supervisors offer direct support to teachers during pre-teaching, during teaching and after teaching, they are likely to perform highly.

The findings are consistent with the philosophical orientation of instructional leadership theory, which posits that teachers who are new to the profession or who demonstrate low self-efficacy require close guidance and structured support to enhance their competence and overall instructional performance (Oyeyemi, 2013; May & Supovitz, 2011). According to this

perspective, instructional leaders, typically school heads or department supervisors play a critical role in shaping teacher effectiveness by providing targeted feedback, modelling best practices, and ensuring adherence to curriculum standards. The implication of this alignment is that directive supervision, when applied thoughtfully, can serve as a practical strategy for operationalizing instructional leadership principles, particularly for teachers who are still developing essential pedagogical skills. By closely monitoring and mentoring these teachers, instructional leaders can promote improved teaching quality, greater classroom efficacy, and better student learning outcomes, while gradually fostering professional autonomy as teachers gain confidence and experience.

5.1.5 Objective Four: The relationship between Collaborative Supervision and Teacher competence in Secondary Schools in Greater Arua

The fourth objective of the study was to examine the relationship between collaborative supervision and teacher competence in secondary schools in Greater Arua. Collaborative supervision is a participatory approach in which supervisors work jointly with teachers to identify instructional challenges, develop solutions, and reflect on teaching practices. Investigating this relationship is important because collaborative supervision emphasizes shared responsibility, peer learning, and professional dialogue, which can foster teacher growth, enhance instructional quality, and promote a culture of continuous improvement. By exploring how collaborative supervisory practices influence teacher competence, the study aimed to determine the

extent to which participatory and collegial approaches support teachers in improving their instructional skills and overall classroom effectiveness.

The findings revealed a significant but weak positive relationship between collaborative supervision and teacher competence in the selected secondary schools in Greater Arua. Consequently, the null hypothesis (H_0), which stated that there was no statistically significant positive relationship between collaborative supervision and teacher competence, was rejected. The alternative hypothesis (H_1), asserting that a statistically significant positive relationship exists between collaborative supervision and teacher competence in Greater Arua, was therefore accepted. These findings suggest that when teachers and supervisors engage in a collegial and participatory supervisory process, teachers are more likely to enhance their instructional competence.

The results align with the study by Wiyono and Rasyad (2021), who found a positive relationship between collaborative supervision and teacher performance, particularly in contexts involving performance-based learning. Their study indicated that as supervisors intensified collaborative supervisory practices, teachers demonstrated higher competence in implementing effective instructional strategies. Collaborative supervision is designed to create a supportive environment in which the supervisor and supervisee work as partners to identify and address instructional challenges (Hoque, et al., 2020). The process typically involves stages of presenting instructional concerns, explaining issues, active listening, joint problem-solving, and negotiating mutually agreed solutions (Karnati, 2019).

The implications of these findings are noteworthy. Collaborative supervision fosters reflective practice, encourages professional dialogue, and

promotes the sharing of instructional ideas, which can enhance teacher competence over time. By involving teachers in the decision-making process, this approach not only improves instructional effectiveness but also builds teacher confidence, autonomy, and ownership of professional development. However, the weak magnitude of the relationship suggests that while collaborative supervision is beneficial, other factors, such as individual teacher motivation, access to resources, and broader school support systems, also play a critical role in determining teacher competence. Therefore, school leaders should complement collaborative supervision with targeted professional development, resource provision, and supportive school policies to maximize its impact on teacher performance.

Additionally, collaborative supervision approaches have also been found to positively impact teachers' pedagogical competence and the quality of school performance (Singerin, 2021). The implementation of academic supervision with a collaborative approach has proven effective in improving mathematics teachers' performance across various aspects of their responsibilities, including lesson planning, implementation, evaluation, and administrative tasks (Anshori & Suwidiyanti, 2020).

Previous studies also revealed that peer feedback and mentoring, which are components of collaborative supervision, have demonstrated positive impacts on the development of teaching skills. A study conducted by Merdekawati (2022) on microteaching during the COVID-19 pandemic found that 70% of student teachers showed high improvement in teaching skills through peer feedback. Similarly, Keiler et al. (2020) found that peer mentoring in urban classrooms has shown promise in changing teaching

practices, particularly in implementing student-centred instruction. Furthermore, Crisp et al. (2020) also concurred with the above findings when they discovered that student facilitators in peer support programs reported developing group facilitation skills and experiencing a greater sense of community and belonging. Moreover, Peer Teacher Training (PTT) programs have shown long-term benefits, with participants demonstrating sustained improvements in their understanding and application of educational principles, as well as increased confidence in teaching upon entering the workforce (Karia et al., 2023).

The literature on collaborative supervision of teachers indicates techniques such as co-reflecting, clarifying, problem-solving and negotiating can significantly impact teacher performance and professional development. Co-reflection, also referred to as collaborative reflection, has been shown to significantly influence teacher competence and professional development. Engaging in joint reflective processes allows teachers to critically analyze their teaching practices, share insights, and receive constructive feedback from peers, thereby enhancing multiple dimensions of competence, including content knowledge, pedagogical strategies, and practical classroom skills (Kulgemeyer et al., 2021). In the context of pre-service teacher education, peer group mentoring that incorporates co-reflection has been particularly effective in creating a shared language and learning framework. This collaborative environment enables teachers to acquire practicum knowledge, develop practical instructional tools, and build inferential and analytical skills necessary for effective teaching (Tiainen & Lutovac, 2022).

The implications of co-reflection for in-service teachers are equally significant. By promoting dialogue, shared problem-solving, and critical examination of instructional practices, co-reflection can foster continuous professional growth, increase instructional effectiveness, and support the development of reflective practitioners capable of adapting to diverse classroom challenges. Integrating co-reflection into routine supervisory practices, such as collaborative supervision, can therefore strengthen teacher competence, enhance professional learning communities, and contribute to improved student learning outcomes. This approach challenges the notion that reflection must be mentor-directed, suggesting that pre-service teacher-initiated reflection can be equally effective.

Research indicates that the quality and nature of supervisory feedback are key factors in its impact on teacher development. For instance, a study of English for Speakers of Other Languages (ESOL) student teachers found that the relational dimension of feedback literacy, that is, the quality of the supervisor-teacher relationship, was most enduring in teachers' memories and practice (Clark-Gareca & Warkentin, 2024). Putra and Hariri (2023) found that collaborative supervision models, which involve shared reflection and feedback among educators, contribute to improving teaching practices. These models often include the participation of principals, senior teachers, and peers in the supervisory process, fostering a supportive environment for teacher growth (Suwardi et al., 2020). Similarly, another study highlighted the importance of collaborative supervision practices, peer work, and constructive feedback in improving pedagogical intervention and creating learning communities (de Nazaré et al., 2020).

Similarly, collaborative supervision models that incorporate peer evaluation have been shown to positively impact pedagogical competence and the quality of school performance, although the principal's motivation was found to moderate these effects to varying degrees (Singerin, 2021). Moreover, the use of information technology in diagnostic feedback supervision models is very effective in improving professional competence (Wiyono & Rasyad, 2021).

Furthermore, collaborative supervision has been identified as a significant factor in enhancing teacher effectiveness. The studies reviewed provide evidence that collaborative models of supervision, involving principals, senior teachers, and peers, contribute positively to teacher development and instructional quality (de Nazaré et al., 2020; Suwardi et al., 2020; Cravens & Hunter, 2021; Summaya & Aisha, 2011; de Oliveira & Jones, 2024; Zepeda et al., 2020; Wiyono & Rasyad, 2021). These models include various activities such as training, practice, co-planning, peer observation, feedback, and reflective practices. Peer observation involves colleagues observing each other's teaching practices, providing feedback, and collaborating to enhance instructional quality. In a Critical Theoretical Review of Global Practices, Nguyen (2021) found that peer observation was not only an assessment method but also a means for professional development since the process involved reflection on classroom practices.

Contrary to the positive relationship observed in some studies, Hoque, et al. (2020) found no significant relationship between collaborative supervision and teacher performance. This suggests that, in their context, the principals' use of collaborative supervisory practices did not substantially

enhance teachers' abilities in critical instructional areas such as lesson planning, delivery, and assessment of learning. The finding implies that merely implementing collaborative supervision without considering contextual factors such as teachers' existing competence, motivation, or access to resources may be insufficient to improve professional performance.

To address this gap, the study recommends that supervisors adopt a developmental supervision approach, in which supervisory strategies are carefully aligned with the teacher's competence level, experience, and motivational profile. By tailoring supervision in this way, supervisors can provide appropriate guidance and support, ensuring that teachers receive the right balance of direction, collaboration, and autonomy to strengthen their instructional skills. This approach has the potential to enhance teacher competence more effectively than a one-size-fits-all model of collaborative supervision, thereby promoting higher-quality teaching and improved student learning outcomes.

In addition, while collaborative supervision has shown positive outcomes, de Nazaré et al. (2020) noted that some teachers still associate supervision with evaluative and bureaucratic procedures, which can affect interpersonal relationships between supervisors and teachers. This contradiction highlights the need for clear communication and understanding of the collaborative supervision process. It is also crucial to address the challenges faced by principals, such as time constraints and administrative workload, and to clarify the distinction between supervision and teacher performance evaluation. Additionally, despite the positive influence of collaborative supervision on performance-based learning, it does not

necessarily translate into direct improvements in student learning outcomes (Wiyono et al., 2021). Furthermore, the effectiveness of supervision is contingent upon the willingness of principals to engage in the process (Putra & Hariri, 2023).

In conclusion, collaborative supervision models have demonstrated their effectiveness in enhancing teacher competence across various domains. These models of collaborative supervision emphasize peer evaluation, joint reflection, and teamwork, all of which contribute to the enhancement of pedagogical skills and professional development (de Nazaré et al., 2020). By creating a structured yet supportive environment, teachers are encouraged to share experiences, observe each other's practices, and provide constructive feedback. This participatory approach not only strengthens individual teacher competence but also fosters a culture of continuous learning within the school. As teachers learn from their peers and engage in reflective discussions, instructional practices are refined, which can lead to improved classroom performance, better student outcomes, and overall enhancement of school effectiveness. Collaborative supervision, therefore, serves as a vital mechanism for promoting professional growth and organisational learning.

5.1.6 Objective Five: The Relationship Between Non-Directive Supervision and Teacher Competence in Secondary Schools in Greater Arua

The fifth objective of the study was to examine the relationship between non-directive supervision and teacher competence in secondary schools in Greater Arua. The results revealed a weak but positive relationship between non-directive supervision and teacher competence, indicating that while the

influence is modest, it is still meaningful. Non-directive supervision, as described by Ozyildirim (2016), is a supervisory approach in which the supervisor encourages teachers to explore multiple alternatives, develop their own solutions to instructional challenges, and select the strategies that best suit their classroom context. This approach promotes creativity, critical thinking, innovation, and professional autonomy, enabling teachers to take ownership of their teaching practices. At the same time, the supervisor provides constructive support and feedback when necessary, ensuring that teachers remain guided and focused on improving instructional quality. By fostering reflective practice and problem-solving skills, non-directive supervision can contribute to gradual and sustainable improvements in teacher competence, enhancing both classroom effectiveness and student learning outcomes.

The findings, based on the Pearson's correlation coefficient, indicated a positive relationship between non-directive supervision and teacher competence, with $r = 0.161^*$ and a significance level of 0.012, which is less than the 0.05 threshold. This demonstrates that the relationship is statistically significant, albeit weak, suggesting that as non-directive supervision increases, teacher competence also tends to improve. Consequently, the null hypothesis (H_0), which stated that there is no statistically significant relationship between non-directive supervision and teacher competence in secondary schools, was rejected. The alternative hypothesis (H_1), which proposes that a statistically significant positive relationship exists between non-directive supervision and teacher competence in Greater Arua, was therefore accepted.

From the perspective of instructional leadership theory, non-directive supervision aligns closely with the principle that effective school leaders should support teacher growth by creating conditions that promote professional autonomy, reflective practice, and problem-solving (Oyeyemi, 2013). By allowing teachers to explore alternatives, generate solutions, and implement strategies with guidance rather than strict direction, non-directive supervision encourages teachers to take ownership of their instructional practices. This approach not only strengthens teacher competence but also fosters a collaborative, growth-oriented school culture that enhances instructional quality and ultimately improves student learning outcomes.

The current finding is consistent with Okia et al. (2021), who reported that non-directive support supervision exerts a moderate positive influence on teacher performance. This suggests that when teachers are empowered to make decisions regarding instructional improvement, they develop greater knowledge, skills, and confidence, which enhances their overall professional performance. Similarly, Ntege et al. (2023) found that team planning which is a sub-variable of non-directive supervision, positively impacts teacher instructional effectiveness. These findings indicate that teacher competence is strengthened when teachers are encouraged to engage in self-reflection, collaborative problem-solving, and independent decision-making, all of which cultivate critical thinking and adaptive instructional skills.

From the perspective of instructional leadership theory, these results reinforce the notion that effective school leaders facilitate teacher growth by providing autonomy, supportive guidance, and opportunities for reflective practice (Oyeyemi, 2013). By implementing non-directive supervision

strategies, leaders enable teachers to take ownership of their instructional practices, make informed decisions, and collectively address instructional challenges. Such an approach not only enhances individual teacher competence but also fosters a professional learning culture within the school, which can contribute to improved instructional quality and better student learning outcomes.

Additionally, non-directive supervision approaches can be effective in boosting teacher competence, as they emphasise independent development and self-reflection. The diagnostic feedback supervision model based on information technology, as discussed by Wiyono et al. (2021), exemplifies a structured and data-driven approach to instructional supervision. This model operates through a continuous cycle of planning, implementation, and evaluation, supported by technological tools, which facilitates timely, evidence-based feedback for teachers. By providing targeted guidance, identifying areas for improvement, and monitoring progress, this approach has been shown to significantly enhance teachers' professional competence.

From the perspective of instructional leadership theory, integrating technology in supervision aligns with the principle that school leaders should create supportive environments, provide relevant resources, and use systematic feedback mechanisms to strengthen teacher performance and instructional quality. This model encourages reflective practice, informed decision-making, and continuous professional growth, thereby improving both teacher competence and overall student learning outcomes.

Previous scholars have found that non-directive supervision positively influences teachers' professional skills by promoting autonomy and

encouraging reflection and growth (Castro-Rodríguez, 2022; Ghamrawi et al., 2019; Zepeda et al., 2020). In this approach, supervisors guide teachers in recognizing areas that need improvement and in developing strategies to enhance their professional capabilities (Neyra et al., 2021).

From the viewpoint of instructional leadership theory, non-directive supervision supports teacher development by fostering environments where educators can make decisions, reflect on their practice, and solve instructional challenges independently. This, in turn, strengthens teacher competence and contributes to higher-quality teaching. This method aligns with the principles of adult learning and career-stage theory, which address different needs to promote cognitive development and improve instructional practices. Career-stage theory is a framework that explores how individuals move through various phases of their careers, each with unique traits and challenges (Ssebunya et al., 2023). This suggests that the supervisory approach should correspond to the teacher's stage of professional development, especially in the implementation of reforms in education.

Additionally, Holdsworth (2020) revealed that reflective practice is a crucial element of non-directive supervision that enhances teacher competence. Supervisors can facilitate deeper learning and professional growth by encouraging teachers to examine their practice and experiences critically. This aligns with the view that reflective practice has the potential to improve both teaching and teaching about teaching. Relatedly, the non-directive approach applied by the Finnish cooperative teachers was found to have positively influenced the development of the student teachers' professional competence, especially during practicums (Puroila et al., 2021).

Consequently, this study identified six different perspectives through which collaborative teachers understood and carried out their supervisory responsibilities, highlighting the multifaceted nature of supervision, contributing to student teachers' professional development.

Project-based activities represent another aspect of non-directive supervision that can enhance teacher competence. A study by Bondar (2021) found a positive correlation between project activities and the development of university students of Foreign Languages. These activities allow teachers to apply their knowledge and skills in practical settings, promoting independence in planning, organising, and monitoring their work. This approach shifts the focus to active mental engagement and helps develop research skills and creativity. Within the realm of digital competence, non-directive supervision can support teachers in developing the skills required for effective technology integration in their classrooms.

A scoping review by Norhagen et al. (2024) on professional digital competence in Norwegian teacher education demonstrated a positive relationship between non-directive supervision and the enhancement of digital skills. The study defined Professional Digital Competence (PDC) as the essential knowledge and abilities needed to utilize digital tools effectively in teaching and learning. Through non-directive supervision, supervisors guide teachers in exploring and developing these competencies, providing opportunities for reflection, experimentation, and innovation in the use of technology.

The findings of this study suggest that teachers who receive non-directive supervision are more likely to become autonomous and confident in

integrating ICT into instructional practices. This not only improves their digital literacy but also enhances their broader instructional competence, as teachers are able to design, implement, and assess lessons that leverage technology effectively. In terms of instructional quality, fostering digital competence through non-directive supervision can lead to more engaging, interactive, and student-centered learning experiences. Teachers can adapt digital tools to meet diverse learning needs, provide timely feedback, and promote critical thinking and problem-solving skills among students. Overall, incorporating non-directive supervision to develop professional digital competence contributes to higher teaching effectiveness, improved learning outcomes, and better preparation of students for a technology-driven world.

Nevertheless, Hoque et al. (2020) reported a negative relationship between non-directive supervision and teacher performance. Correspondingly, Ntege et al. (2023) found that aspects of consultation were not significantly associated with non-directive supervision. These variations may be attributed to differences in how supervisors engage with teachers during the supervision process. For instance, if supervisors fail to provide adequate guidance or constructive feedback while allowing teachers autonomy, the potential benefits of non-directive supervision may not be realized. This highlights that the effectiveness of non-directive supervision is contingent upon the quality of interaction, mutual trust, and the teacher's readiness to engage in reflective practice.

In the context of this study, the finding suggests that while non-directive supervision can enhance teacher autonomy and problem-solving skills, its impact on teacher competence may vary depending on how

supervisors facilitate the process. To optimize instructional outcomes, supervisors in Greater Arua should balance autonomy with targeted support, ensuring that teachers are guided in ways that promote professional growth while still encouraging innovation and self-reflection. This approach can strengthen teacher competence, improve instructional quality, and lead to more effective learning experiences for students.

Secondly, despite the recognised benefits of non-directive supervision, some supervisors may prefer directive supervision over non-directive supervision, coupled with a lack of training on the techniques of non-directive supervision. To overcome the challenges that limit the effective implementation of non-directive supervision, it is essential to provide targeted professional development for school-based supervisors. Such training should focus on enhancing supervisors' skills in facilitation, active listening, problem-solving guidance, and harmonizing supervision policies across schools. Glickman et al. (2010) emphasize that effective non-directive supervision requires the supervisor to attentively listen to teachers, clarify misconceptions, and encourage them to take responsibility for implementing improvements in their instructional practice.

In the milieu of this study, building supervisory capacity in non-directive approaches can help teachers become more reflective, autonomous, and innovative in their teaching. When supervisors are well-prepared, they can foster a collaborative environment where teachers feel supported yet empowered to make decisions about their professional growth. Consequently, enhancing supervisors' proficiency in non-directive methods can directly

improve teacher competence, instructional quality, and ultimately student learning outcomes in secondary schools in Greater Arua.

In summary, the findings of this study revealed that non-directive supervision positively increases teacher competence through the use of self-reflection and problem-solving techniques that promote creativity and teacher autonomy. Previous studies have also highlighted the importance of non-directive practices that encourage self-reflection and critical thinking. All these approaches increase the teacher's intrinsic motivation since they are more involved in setting their own goals and solutions to instructional challenges. Therefore, the application of non-directive supervision in schools holds promise for fostering teacher autonomy and enhancing instructional quality. While its implementation is currently limited, increasing emphasis on the application of this approach could lead to more effective and reflective teaching practices.

5.2. Conclusion

The study examined the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. Findings revealed that supervisors apply directive, collaborative, and non-directive supervision, with directive supervision being most frequently used. These approaches reflect key principles of instructional leadership, where supervisors guide, support, and develop teachers to enhance classroom practices and student outcomes. Directive supervision provides structured guidance for less experienced teachers, collaborative supervision fosters teamwork and shared problem-solving, and non-directive supervision encourages teacher autonomy, reflection, and innovation. Overall, the study indicates that instructional leadership through tailored supervision positively influences teacher

competence and instructional quality, highlighting the need for a balanced application of all supervisory approaches.

Furthermore, the study discovered that teachers in Greater Arua display varying levels of competence. They excelled in leadership and professional development, with moderate skills in assessment. Nevertheless, technological competence was significantly low, reflecting limited use of ICT in teaching and formative assessment practices.

The study also found a positive link between directive supervision and teacher competence. This suggests that structured guidance and close monitoring by supervisors play a key role in enhancing teacher performance, although solutions are mainly initiated by supervisors. Furthermore, a positive correlation was found between collaborative supervision and teacher competence, indicating that shared problem-solving between supervisors and teachers enhances instructional practices.

Lastly, the study revealed a significant positive link between non-directive supervision and teacher competence. This indicates that when supervisors empower teachers through self-reflection and independent professional development planning, teacher competence is enhanced.

5.3 Recommendations

In line with the results of this study examining instructional supervision and teacher competence in secondary schools in Greater Arua, the following recommendations are offered

1. Given the predominance of the directive supervisory approach, it is recommended that school-based supervisors tailor their supervisory methods based on individual teacher competence levels. A flexible approach, balancing directive, collaborative, and non-directive strategies, will better support teacher development, enhance job

satisfaction, and improve instructional effectiveness. Schools should invest in developing supervisory frameworks that foster supportive, engaging, and growth-oriented environments for teachers.

2. The Ministry of Education and Sports should facilitate regular workshops, seminars, and professional development programs aimed at enhancing the skills and effectiveness of on-site supervisors, including head teachers deputies and departmental heads. These initiatives should focus on equipping supervisors with the necessary instructional leadership skills, including explicit teaching practices, collaborative planning models, and effective facilitation of Instructional Leadership Team (ILT) meetings. Strengthening supervisors' competencies is essential to shifting their role from administrative managers to instructional leaders.
3. The study revealed significant gaps in technological and assessment competencies among teachers. Schools, in collaboration with the Ministry of Education and Sports, should conduct regular refresher training, particularly in ICT integration and formative assessment practices. This includes providing hands-on ICT training, developing contextually relevant digital teaching resources, and expanding access to continuous professional development opportunities. Investing in these areas will help teachers stay current with educational innovations and improve student learning outcomes.
4. Since directive supervision has shown a strong positive impact on teacher competence, it should be strategically applied to support

teachers with lower performance levels. Supervisors should communicate expectations, provide structured guidance, and offer close monitoring to ensure effective classroom practice. However, this approach should be used selectively and with sensitivity to avoid undermining teacher autonomy.

5. Although the relationship between collaborative supervision and teacher competence was found to be modest, this approach remains valuable in building professional trust and collegiality. Supervisors should shift away from hierarchical models toward more participatory approaches that engage teachers in shared decision-making and instructional problem-solving. Collaborative supervision can promote a culture of continuous improvement and mutual accountability.
6. Supervisors should adopt a facilitative role when working with more Expert teachers or self-motivated teachers by applying non-directive supervision. This involves encouraging teachers to reflect on their instructional practices, set personal development goals, and lead their growth journeys. Fostering a culture of self-reflection supports professional autonomy and long-term competence development.

5.4 Limitations of the Study

While the study provided valuable insights into the relationship between instructional supervision and teacher competence, several limitations were encountered. The study did not achieve a 100% response rate, as some respondents failed to return completed questionnaires. Despite follow-up

efforts, the researcher was unable to recover all missing responses, which may have limited the completeness and representativeness of the data.

Scheduling interviews with head teachers proved challenging, as many were not readily available at their stations. This required rescheduling and extended the data collection period, potentially affecting the consistency and immediacy of responses.

Some teachers appeared hesitant to participate fully in classroom observations, fearing that the researchers might be inspectors from the Directorate of Education Standards. This apprehension may have led to the concealment of key information regarding instructional supervision and personal competence, potentially affecting the authenticity of the data collected.

The study was limited to secondary schools within Arua City and Arua District. As a result, the findings may not be fully generalizable to other regions of Uganda with different educational contexts, resources, and supervision practices.

The research focused exclusively on the three dimensions of developmental supervision is directive, collaborative, and non-directive. This limited scope may have constrained the depth and breadth of findings. Other relevant dimensions and factors influencing instructional supervision were not explored.

The study did not investigate the broader challenges or barriers affecting the implementation of effective instructional supervision. As such, critical contextual and systemic factors that might influence supervision practices and teacher performance were not captured.

The study relied in part on self-reported data from head teachers regarding their instructional supervision practices. This method may have introduced bias, as respondents could have provided socially desirable answers or overstated their involvement in supervision to present themselves in a more favourable light. As a result, the accuracy and objectivity of some responses may have been compromised, potentially affecting the validity of the findings related to supervisory practices.

5.5 Implications of the Study

1. Need for balanced use of supervision approaches. Since all three supervision approaches: directive, collaborative, and non-directive were found to positively influence teacher competence, education stakeholders should promote a balanced and context-specific application of these approaches. Supervisors should be trained to adapt their style to the teacher's competence level and the instructional context, aligning with instructional leadership principles.
2. Strengthening teacher professional development programs. The variation in teacher competence, particularly the low levels of technological competence, implies a need for targeted continuous professional development (CPD) focusing on ICT integration in teaching and assessment. Education authorities should invest in digital literacy training, provision of ICT infrastructure, and support for innovative pedagogies.
3. Enhancing supervisor training. The finding that directive supervision has a strong positive effect on teacher competence highlights the importance of equipping supervisors with skills in structured guidance,

feedback provision, and effective monitoring. However, supervisors should also be trained to shift gradually from directive to collaborative and non-directive methods as teacher competence improves.

4. Policy implications for instructional leadership. The study reinforces the need for policies that emphasise instructional leadership as a core function of school heads and inspectors. Ministry of Education and Sports (MoES) and district education departments should review supervisory guidelines to ensure that lesson observation, feedback, and mentoring are systematically implemented.
5. Focus on teacher empowerment and reflection. The positive relationship between non-directive supervision and teacher competence suggests that teacher autonomy and reflective practice should be strengthened. This can be achieved by creating professional learning communities, peer observation systems, and teacher-led CPD programs.
6. Integration of supervision findings into teacher appraisal. Since supervision practices influence competence, findings from lesson observations and collaborative supervision sessions should feed into teacher appraisal systems, helping identify professional development needs and areas of improvement.
7. Further investment in ICT for teaching and learning. The low technological competence among teachers highlights the need for government and partners to provide infrastructure, training, and incentives for ICT use in teaching, especially in formative assessment and learner engagement.

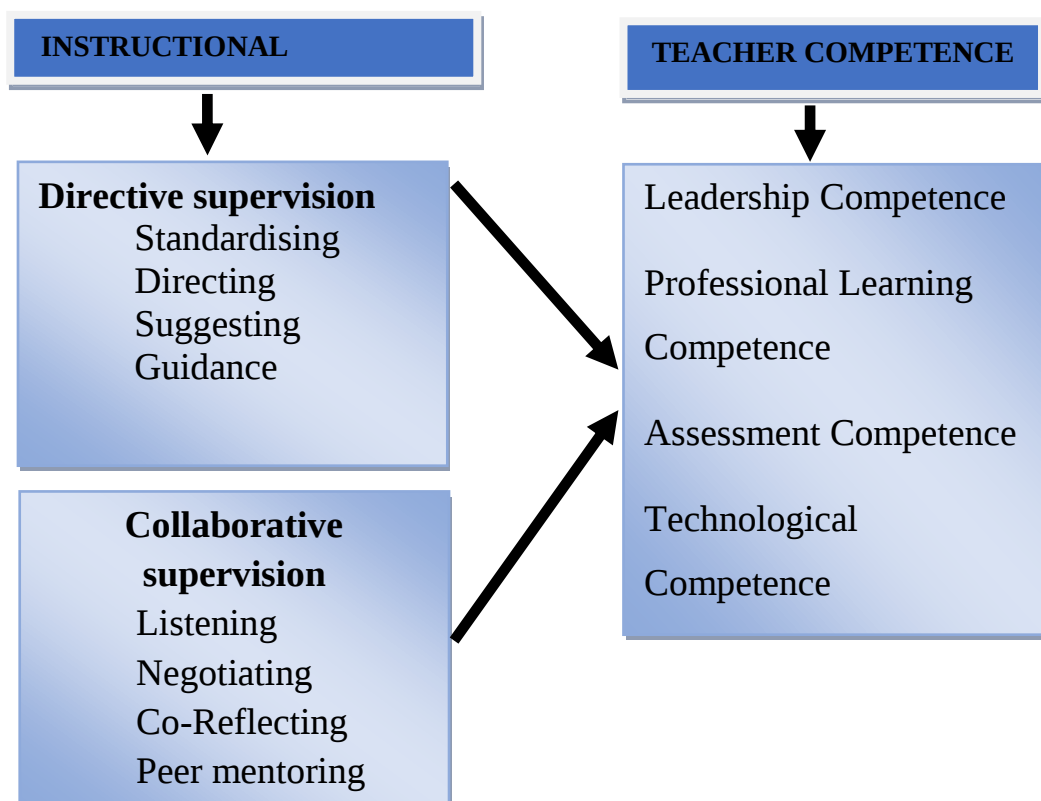
5.6 Contribution to New Knowledge

The study offers practical insights that have direct implications for school leadership, policy, and teacher professional development. The findings provide clear guidance for school heads, inspectors, and education officers, emphasising the importance of adapting supervisory approaches to the competence levels of teachers to enhance instructional practices and learner outcomes. From a policy perspective, the study highlights the need to revise supervisory guidelines and strengthen training programs for supervisors, equipping them with the skills to apply directive, collaborative, and non-directive supervision effectively.

Furthermore, the study identifies low technological competence among teachers, providing evidence to support targeted continuous professional development (CPD) programs in ICT integration, digital pedagogy, and technology-based assessment. These findings are particularly relevant for Uganda as it implements the Competency-Based Curriculum, which requires teachers to integrate ICT into teaching and assessment.

Additionally, the positive impact of non-directive supervision underscores the importance of empowering teachers through autonomy, self-reflection, and independent professional development, encouraging schools to establish professional learning communities and mentorship programs. Overall, the study contributes to efforts to improve teacher performance, enhance education quality, and achieve national education reform goals in Uganda. From the above findings, the researcher suggested a Teacher Competence Model for Secondary schools. Additionally, the researcher proposed the Teacher Competence Framework for Secondary Schools in Uganda.

5.6.1 Teacher Competence Model for Secondary Schools in Uganda



Sources: Primary Data, 2023

Figure 5.1

Omara's Teacher Competence Model (TECEM) for Secondary Schools in Uganda (2024)

The figure above depicts that effective teacher competence models for secondary schools should incorporate a combination of traditional professional development approaches and innovative technological solutions. Moreover, instructional supervisory models such as directive and collaborative approaches have been found to improve teacher competence. These models should address various aspects of teacher competence, including subject knowledge, pedagogical skills, digital literacy, and 21st-century skills. Ongoing evaluation and refinement of these supervisory models are essential to ensure they remain responsive to the evolving needs of both teachers and students within the dynamic educational environment.

Secondly, the study also proposed a secondary teacher competence framework that includes leadership, professional learning, assessment, and technological competence. This might enable teacher training institutions and universities to prepare teachers who meet the demands of the society they serve. To develop the teacher competence framework, ten head teachers and ten deputy head teachers participated in the interviews, which were audio recorded and transcribed. Coding was carried out using transcribed data, field notes, audit journals, memos, and labels. The technique of coding from various sources was to ensure a systematic process leading to acceptable credibility of findings. At this level, debriefing was highly applied to facilitate standards in qualitative judgment (trustworthiness). At the analysis stage, concepts from common themes were ranked according to the number of informants and the frequency with which it was mentioned. A concept was taken to be valid if 60% of the participants mentioned it. Additionally, existing literature supported the analysis, leading to constructs which would be symbolic of a teacher's competence. The researcher referred to the newly added information as the Teacher Competence Framework for Secondary Schools.

Table 5.1
The Proposed Teacher Competence Framework for Secondary Schools

Competence Area	Descriptors
Leadership and management	• Maintaining a safe classroom environment • Communicating effectively • Encouraging students' high expectations • Applying effective motivation strategies • Embracing diversity
Professional Learning	• Engaging in reflective practice • Engaging in peer mentoring • Setting professional goals
Assessment competence	• Designing formative assignment tasks • Designing summative assignment tasks • Providing Assessment feedback objectively • Recording assessment results
Technological competence	• Designing instructional materials • Making use of the local environment • Integrating technology to maximise student learning

Sources: Primary Data, 2023

The above framework defines the knowledge, skills, and attitudes required for effective teaching in the 21st century. The framework postulates four key competence areas, with their attributes, namely leadership, professional learning, assessment and technological competence. The framework is critical at all levels of the teacher's practice. At the classroom level, the competence framework supports teachers' practice and continuous professional development. The framework fosters collaboration and reflection within professional learning communities at the school level, supporting schools as learning organisations. At the national level, the framework serves as a reference standard for initial teacher education and quality assurance throughout teachers' careers.

5.7 Suggestions for Further Research

The study was intended to investigate the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. The researcher suggests further studies to understand the phenomenon.

1. Investigation of contextual and systemic obstacles to effective instructional supervision. Future research could explore policy, administrative, cultural, and resource-related issues that impede the implementation of effective instructional supervision in secondary schools within Greater Arua. This would aid in pinpointing structural factors such as teacher workload, school leadership support, education policies, funding, and accountability mechanisms that affect supervision practices.
2. Effect of broader socio-economic and regional contexts on supervision practices. Further research could explore how regional disparities, community involvement, and socio-economic factors influence both supervision and teacher competence. Such studies could offer context-sensitive solutions for enhancing supervision in diverse school environments.
3. Employing multiple data collection methods helps to reduce self-reporting bias. To tackle the issue of socially desirable responses, future studies could combine classroom observations, document analysis (e.g., lesson plans, supervision reports), and interviews with teachers to triangulate data. Comparative research could also

investigate differences between self-reported supervisory practices and actual observed practices.

4. Comparative studies across districts or regions. Further research could compare instructional supervision practices and challenges in Greater Arua with other regions in Uganda or East Africa. This would help establish whether the challenges are unique to the area or part of broader national trends. In addition, future studies could also compare the status of teacher competence in government-aided and private schools in Uganda.
5. Examining the relationship between supervisory practices and student outcomes. Future studies could extend the focus beyond teacher competence to explore how supervision ultimately affects learner achievement, motivation, and engagement.
6. Exploring teacher perceptions of instructional supervision. Since this study largely relied on head teachers' self-reports, future research could investigate teachers' perspectives on the quality, frequency, and impact of instructional supervision, which may differ from what supervisors report.
7. Investigating professional development strategies linked to supervision. Research could assess how specific supervisory practices (e.g., lesson observation, feedback, mentoring) influence teacher professional growth when combined with structured continuous professional development (CPD) programs.

REFERENCES

- Abdallah, A. K. (2023). Teacher-led, student-focused, and unleashing the power of teacher empowerment for school improvement and success. *Information Resources Management Association*, 21. <https://doi.org/10.4018/978-1-6684-7818-9.ch001>
- Abdallah, A. K., & Alkaabi, A. M. (2023). Induction programs' effectiveness in boosting new teachers' instruction and student achievement: A critical review. *International Journal of Learning, Teaching and Educational Research*, 22(5), 493–517. <https://doi.org/10.26803/ijlter.22.5.25>
- Abebe, T., & Tesfaye, M. (2021). Instructional supervision and teacher competence in ethiopian secondary schools. *Journal of Educational Leadership Studies*.
- Afema, A. (2016). *Lecturer competence and perceived impact on student's academic performance in Uganda National Teachers Colleges. A case of Muni and Mubende*. Kyambogo.
- Ahmad, Marah, D. N. (2017). *approaches to school supervision in Indonesian context*. 109(Aecon), 6–9.
- Akcan, S., & Tatar, S. (2010). *An investigation of the nature of feedback given to pre- service English teachers during their practice teaching experience*. 4530. <https://doi.org/10.1080/13664530.2010.494495>
- Akello, L. D., & Timmerman, M. C. G. (2018). Formative assessment : The role of participatory action research in blending policy and practice in Uganda. *Educational Action Research*, 0792, 1–19. <https://doi.org/10.1080/09650792.2017.1405831>
- Akinbode, S. 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>
- Akinfolarin, C. (2017). *Academic supervision as a correlate of students' academic performance in secondary schools in Ekiti.* 4(1), 8–13.
- Akram, M., Malik, M. I., & Sarwar, M. (2015). *Relationship of teacher competence with professional commitment and job satisfaction at secondary level.* July.
- Ali, M. Q., & Ahmad, S. (2021). The Impact of Principal Instructional Leadership on Teaching Practices in Malaysia. *Asian Journal of Education.*
- Alkalah, C. (2021). Improving Classroom observation through training: A qualitative Study in College of Technology in Oman. *Arab World English Journal*, 12(4), 415–425. <https://doi.org/https://dx.doi.org/10.24093/awej/vol12no4.27>
- Altun, B., & Yengin Sarkaya, P. (2020). The actors of teacher supervision. *Journal of Human Sciences*, 17(1), 284–303. <https://doi.org/10.14687/jhs.v17i1.5880>
- Amelia, C., Aprilianto, A., Supriatna, D., Rusydi, I., & Elza, N. (2021). *The principal's role as education supervisor in improving teacher professionalism.* 144–155.
- Amoah, S. A. F. O.-M. L. P. (2016). Managing school discipline: The students' and teachers' perception on disciplinary strategies. *British Journal of Psychology Research*, 3(2), 1–23.
- 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>
- Angucia, H. (2015). *The effects of instructional supervision on professional development: perception of public primary school teachers in Arua municipality, Uganda*. Aga Khan University.
- Angundaru, G., Lubogoyi, B., & Bagire, V. (2016). Human resource practices and teacher engagement in the rural setting of Ugandan Schools. *DBA Africa Management Review*, 6(1), 44–56. <http://journals.uonbi.ac.ke/damr44%7Chttp://journals.uonbi.ac.ke/damr45%7C>
- Annenkova, A. (2021). *Developing students' intercultural communicative competence for academic mobility purposes*. 1317–1325. <https://doi.org/10.15405/epsbs.2021.05.02.168>
- Anshori, I., & Suwidiyanti. (2020). Improvement of mathematics teacher performance through academic supervision with collaborative approaches. *International Journal of Educational Research Review*, 5(3), 227–242. <https://doi.org/10.24331/ijere.735935>
- Appiah, A. K. (2018). *Teacher job performance : The role of headteachers ' supervisory styles in public basic schools in Mankessim circuit*. 4, 212–220.
- Aprilianto, D., Raharjo, B. B., & Nasuka, N. (2022). The role of physical education, sports, and health subject teacher deliberations for Junior High Schools in Bandar Lampung City in supporting teacher competence. *Journal of Physical Education and Sports*, 11(2), 282–290. <https://journal.unnes.ac.id/sju/index.php/jpes>

- 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>
- Arballo, N. C., Núñez, M. E. C., & Tapia, B. R. (2019). Technological competences: A systematic review of the literature in 22 years of study. *International Journal of Emerging Technologies in Learning*, 14(4), 4–30. <https://doi.org/10.3991/ijet.v14i04.9118>
- Armin, J., & König, J. (2022). *Teacher competence and professional development* (pp. 1166–1183). https://doi.org/https://doi.org/10.1007/978-3-030-88178-8_38
- Armstrong, M. (2010). *Armstrong's essential human resource management practices: A guide to people Management*. Library of Congress Cataloging-in-Publication Data.
- Asgari, M., Miles, A. M., Lisboa, M. S., & Sarvary, M. A. (2021). COPUS, PORTAAL, or DART? Classroom observation tool comparison from the instructor user's perspective. *frontiers in Education*, 6 (November), 1–14. <https://doi.org/10.3389/educ.2021.740344>
- Atieno, A. J. (2014). *Influence of teaching and learning resources on students' performance in KCSE in FDSE in Embakasi district*.
- Atmojo, I. R. W., Ardiansyah, R., & Wulandari, W. (2022). Classroom teacher's digital literacy level based on Instant Digital Competence Assessment (IDCA) Perspective. *Mimbar Sekolah Dasar*, 9(3), 431–445. <https://doi.org/10.53400/mimbar-sd.v9i3.51957>
- Atuhurra, J., & Kaffenberger, M. (2022). Measuring education system

- coherence: Alignment of curriculum standards, examinations, and teacher instruction in Tanzania and Uganda. *International Journal of Educational Development*, 92(May), 102598. <https://doi.org/10.1016/j.ijedudev.2022.102598>
- Bagaya, J., & Wafula, W. S. (2020). Influence of secondary school inspection on lesson planning in western Uganda. *Journal of Education and Practice*, 11(3), 1–8. <https://doi.org/10.7176/jep/11-3-01>
- Bahadur Kadel, P. (2023). Prospects and practices of induction for novice teachers. *Journal of Practical Studies in Education*, 4(2), 1–5. <https://doi.org/10.46809/jpse.v4i2.63>
- Baluyos, G., & Clarin, A. R. (2021). Experiences of Instructors in Online Teaching: A Phenomenological Study. *EduLine: Journal of Education and Learning Innovation*, 1(2), 99–117. <https://doi.org/10.35877/454ri.eduline542>
- Basantes-Andrade, A., Casillas-Martín, S., Cabezas-González, M., Naranjo-Toro, M., & Guerra-Reyes, F. (2022). Standards of teacher digital competence in higher education: A systematic literature review. *Sustainability (Switzerland)*, 14(21). <https://doi.org/10.3390/su142113983>
- Bearman, M. (2019). *Focus on Methodology : Eliciting rich data : A practical approach to writing semi-structured interview schedules*. 20(3), 1–11.
- Beaumont, C., O'Doherty, M., & Shannon, L. (2011). Reconceptualising assessment feedback: A key to improving student learning? *Studies in Higher Education*, 36(6), 671–687. <https://doi.org/10.1080/03075071003731135>

- Bello, A. T., & Olaer, J. H. (2020). The influence of clinical supervision on the instructional competence of secondary school teachers. *Asian Journal of Education and Social Studies*, 12(3), 42–50. <https://doi.org/10.9734/ajess/2020/v12i330314>
- Bencherab, A., & Al Maskari, A. (2021). Clinical supervision: A genius tool for teachers' professional growth. *The Universal Academic Research Journal*, 3(2), 51–57. <https://doi.org/10.17220/tuara.2021.02.11>
- Bennett, S., Myatt, M., Damien, J., & Andrzej, R. (2001). *Data management for surveys and trials. A practical primer using EpiData* (1st ed.). The EpiData Documentation Project.
- Bondar, H. (2021). The Function of Project Activities in the Development of Students Foreign Professional competence of Non-Language Universities. *Psychological and Pedagogical Problems of Modern School*, 1(1(5)), 118–125. [https://doi.org/10.31499/2706-6258.1\(5\).2021.235213](https://doi.org/10.31499/2706-6258.1(5).2021.235213)
- Bradshaw, C., & Gaestel, T. (2023, October). Case study: Arua public secondary school, Arua Uganda. *African Library Project*, 1. <https://www.africanlibraryproject.org/case-study-arua-public-secondary-school/>
- Brenner, M. E. (2006). Interviewing in educational research. *Handbook of Complementary Methods in Education Research*, 357–370.
- Brewer, G., Williams, A., & Sher, W. (2007). Utilising learning contracts to stimulate student ownership of learning. *Proceedings of the 2007 AaeE Conference, Melbourne*, 1–8.
- Brownless, S. (2020). Practical application of Theory X & Y Management

- approaches : Sixty years on. *Chartered Project Professional Practical*.
- Bruce, K., & Nyland, C. (2011). *Elton Mayo and the deification of Human Relations*. 32(3), 383–405. <https://doi.org/10.1177/0170840610397478>
- Bush, T. (2020). Instructional leadership: concepts and practices. *Educational Management Administration & Leadership*.
- Busulwa, H. S., & Bbuye, J. (2018). Attitudes and coping practices of using mobile phones for teaching and learning in a Uganda secondary school. *Open Learning: The Journal of Open, Distance and e-Learning*, 0513, 1–11. <https://doi.org/10.1080/02680513.2017.1414588>
- Bwiruka, J., Maani, J., & Ssetumba, J. (2021). Student Teachers' Perceptions and Experiences on Mentoring practices and competence development at Makerere University in Uganda. *American Journal of Education and Practice*, 5(2), 26–52. <https://doi.org/10.47672/ajep.707>
- Caena, Caena, F. (2014). *Teacher Competence Frameworks in Europe : policy-as-discourse and policy-as-practice*. 49(3). <https://doi.org/10.1111/ejed.12088>
- Carlson, J. R. (2019). “How am I going to handle the situation?” The role(s) of reflective practice and critical friend groups in Secondary Teacher Education. *International Journal for the Scholarship of Teaching and Learning*, 13(1). <https://doi.org/10.20429/ijstl.2019.130112>
- Carmen, R. G., Olga, B. G., & Beatriz, M. (2022). Socio-emotional competence and self-efficacy of future secondary school teachers. *Education Sciences*, 12(3). <https://doi.org/10.3390/educsci12030161>
- Castro-Rodríguez, Y. (2022). Relationship between the supervisory approach and the satisfaction of the University theses in Dentistry. *Odovtos* -

International Journal of Dental Sciences, 24(2), 34–46.

<https://doi.org/10.15517/IJDS.2021.46377>

CEES, M. U., & GESCI. (2022). *Formative study on the utilisation of past and present learning assessments in Uganda, Research Report*.

Chemodanova, G., Olkova, I., Gumel, E., Volchkova, N., & Spulber, D.

(2022). Formation of future teachers' leadership competence at a Higher Education Institution. *Geopolitical, Social Security and Freedom Journal*, 5(2), 78–92. <https://doi.org/10.2478/gssfj-2022-0015>

Chen, C. (2018). Facilitation of teachers' professional development through principals' instructional supervision and teachers' knowledge-management behaviors. In *Contemporary Pedagogies in Teacher Education and Development* (pp. 52–64). National Chengchi University, Taipei, Taiwan. <https://doi.org/http://dx.doi.org/10.5772/intechopen.77978>

Chirwa, G., & Mhlanga, E. (2021). Challenges of instructional supervision in Malawi secondary schools. *African Journal of Educational Supervision*.

Christopher, E., Km, O., & Makundi, C. (2024). Effect of school supervision in improving learning effectiveness in public secondary schools in Ilala municipality Dar ES Salaam region Tanzania. *International Journal of Multidisciplinary Research and Growth Evaluation*, 5(1), 300–312.

Clark-Gareca, B., & Warkentin, T. B. (2024). Memory and relationships: A look into teachers' recollection of supervisory feedback. *TESOL Journal*, March, 1–16. <https://doi.org/10.1002/tesj.823>

Cohen, L., Manion, L., & Morrison, K. (2013). *Research Methods in Education*. Taylor & Francis.

<https://books.google.co.ug/books?id=LYzhAQAAQBAJ>

- Cook-sather, A., Cook-sather, A., & College, B. M. (2010). *Students as learners and teachers: taking responsibility, transforming education, and redefining accountability*. 4 (September), 555–575.
- Cook, D. (2023). What is a digital nomad? Definition and taxonomy in the era of mainstream remote work. *World Leisure Journal*, 65(2), 256–275. <https://doi.org/10.1080/16078055.2023.2190608>
- Cravens, X. C., & Hunter, S. B. (2021). Assessing the impact of collaborative inquiry on teacher performance and effectiveness. *School Effectiveness and School Improvement*, 32(4), 564–606. <https://doi.org/10.1080/09243453.2021.1923532>
- Creswell, J. W. (2009a). *Research Design- Cresswell 3rd Ed.pdf*. SAGE Publications.
- Creswell, J. W. (2009b). *Research design: qualitative, quantitative, and mixed methods approaches* (3rd ed). Sage Publications.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Creswell, J. W., & Cresswell, D. J. (2023). Research design: Qualitative, quantitative and mixed approaches. In *SAGE Open* (6th ed., Vol. 6, Issue 1). SAGE Publications Sage CA: Los Angeles, CA. <http://repositorio.unan.edu.ni/2986/1/5624.pdf%0Ahttp://fiskal.kemenkeu.go.id/ejournal%0Ahttp://dx.doi.org/10.1016/j.cirp.2016.06.001%0Ahttp://dx.doi.org/10.1016/j.powtec.2016.12.055%0Ahttps://doi.org/10.1016/j.jfatigue.2019.02.006%0Ahttps://doi.org/10.1>
- Crisp, D. A., Byrom, N., Martin, B., & Rickwood, D. (2020). Implementing a

- peer support program for improving university student wellbeing: The experience of program facilitators. *Australian Journal of Education*, 64(2), 113–126. <https://doi.org/10.1177/0004944120910498>
- Darling-Hammond, L. (2016). Research on teaching and teacher education and its influences on policy and practice. *Educational Researcher*, 45(2), 83–91. <https://doi.org/10.3102/0013189X16639597>
- Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-methods research: A discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, 2(2), 25–36. <https://doi.org/10.46809/jpse.v2i2.20>
- de Oliveira, L. C., & Jones, L. (2024). The preparation of supervisors through collaborative supervision: A narrative account. *TESOL Journal*, July 2023, 1–16. <https://doi.org/10.1002/tesj.830>
- de Nazaré Coimbra, M. de N. C., Pereira, A. V., de Oliveira Martins, A. M., & Maria Baptista, C. (2020). Pedagogical Supervision and change: Dynamics of collaboration and teacher development. *The International Journal of Management Science and Business Administration*, 6(4), 55–62. <https://doi.org/10.18775/ijmsba.1849-5664-5419.2014.64.1005>
- de Vries, J. A., Dimosthenous, A., Schildkamp, K., & Visscher, A. J. (2022). The impact on student achievement of an assessment for learning teacher professional development program. *Studies in Educational Evaluation*, 74(July), 101184. <https://doi.org/10.1016/j.stueduc.2022.101184>
- DeLuca, C., Schneider, C., Coombs, A., Pozas, M., & Rasooli, A. (2019). A cross-cultural comparison of German and Canadian student teachers' assessment competence. *Assessment in Education: Principles, Policy and Practice*, 27(1), 26–45. <https://doi.org/10.1080/0969594X.2019.1703171>

- Demeshkant, N. (2020). Future academic teachers' digital skills: Polish case-study. *Universal Journal of Educational Research*, 8(7), 3173–3178. <https://doi.org/10.13189/ujer.2020.080746>
- Drateru, H. D. (2024). *Headteachers' leadership styles and teacher job satisfaction in government aided secondary schools in Arua City* [Muni University]. <https://dir.muni.ac.ug:8443/server/api/ore/bitstreams/fb3744a4-18b9-4bac-996f-fc7ac680a247/content>
- Duran, V., Can, T., & Özer, B. (2020). Development of an individual professional development plan proposal that is based on continuing professional development needs of teachers. *The European Educational Researcher*, 3(3), 139–172. <https://doi.org/10.31757/euer.334>
- Edgar, D., Moroney, T., & Wilson, V. (2023). Clinical supervision: A mechanism to support person-centred practice? An integrative review of the literature. *Journal of Clinical Nursing*, 32(9–10), 1935–1951. <https://doi.org/10.1111/jocn.16232>
- Edgar, S., E, M., & D, M. (2022). Close to school supervision in Tanzania: Collective views on teachers' job performance. *American Journal of Arts and Human Science*, 1(3), 10–13. <https://doi.org/10.54536/ajahs.v1i3.581>
- Edison, B., & Kasujja, P. J. (2020). ICT usage in teaching and its' influence on students 'academic performance in Uganda certificate of education (UCE) in Kasese District. *International Journal of Education and Research*, 8(2), 21–40. http://ir.umu.ac.ug/bitstream/handle/20.500.12280/2601/Kasujja_Health_Article_2020_ICT.pdf?sequence=1&isAllowed=y
- Elyna, H., Janika, L., Kori, K., & Mettis, K. (2021). Enhancing teacher-

- students' digital competence with educational robots. *Robotics in Education*, 1359. [https://doi.org/https://doi.org/10.1007/978-3-030-82544-7_15](https://doi.org/10.1007/978-3-030-82544-7_15)
- Engin, M. (2015). Trainer talk in post-observation feedback sessions: An exploration of scaffolding. *Classroom Discourse*, 6(1), 57–72. <https://doi.org/10.1080/19463014.2014.919867>
- Ergünay, O., & Parsons, S. (2022). A comparison of teacher competence frameworks in the USA and Türkiye. *4th International Conference on Educational Research (IDU-ICER 22)*.
- Essack, Z., Ngcobo, N., Van der Pol, N., Knight, L., Rochat, T., Mkhize, M., & Van Rooyen, H. (2020). Refining Interventions Through Formative Research: A Focus on Ethical Considerations in a Family-Based Home-Based Counseling and Testing (FBCT) Intervention in KwaZulu-Natal. *Journal of Empirical Research on Human Research Ethics*, 15(3), 153–162. <https://doi.org/10.1177/1556264619885214>
- European Commission. (2013). Supporting teacher competence development for better learning outcomes. In *European Commission, Education and Training*. <https://doi.org/10.1093/carcin/bgt077>
- Farrell, G. (2007). *Survey of ICT and education in Africa: Uganda country report*.
- Fauth, B., Decristan, J., Decker, A. T., Büttner, G., Hardy, I., Klieme, E., & Kunter, M. (2019). The effects of teacher competence on student outcomes in elementary science education: The mediating role of teaching quality. *Teaching and Teacher Education*, 86. <https://doi.org/10.1016/j.tate.2019.102882>

- Ghamrawi, N., Ghamrawi, N., & Shal, T. (2019). Differentiated education supervision approaches in schools through the lens of teachers. *International Journal for Innovation Education and Research*, 7(11), 1341–1357. <https://doi.org/10.31686/ijer.vol7.iss11.2011>
- Ghavifekr, S., & Sani, M. (2014). Head of departments ' instructional supervisory role and teachers ' job performance : teachers ' perceptions. *Asian Journal of Social Sciences*, 1(2), 45–56.
- Giacomazzi, M. (2021). The role of assessment practices in fostering higher order thinking skills: The case of Uganda certificate of education. *American Journal of Educational Research*, 9 (10).
- Glanz, J., Shulman, V., & Sullivan, S. (2007). Impact of instructional supervision on student achievement: Can we make the connection?. *Online Submission*, 1–28.
- Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. (2010). *Supervision and instructional leadership: A developmental approach, 8th Edition* (Eighth edi). Pearson.
- Gogo, S., & Musonda, I. (2022). The use of the exploratory sequential approach in mixed-method research: A case of contextual top leadership interventions in construction H&S. *International Journal of Environmental Research and Public Health*, 19(12). <https://doi.org/10.3390/ijerph19127276>
- Gorbunov, Y. I., & Gorbunova, O. Y. (2019). Linguist-translator's professional competence: Its essence and content. *Vestnik of Samara University. History, Pedagogics, Philology*, 25(3), 148–155. <https://doi.org/10.18287/2542-0445-2019-25-3-148-155>

- Grimm, E. D., Kaufman, T., & Doty, D. (2014). Rethinking classroom observation. *Educational Leadership*, 71(8), 24–29.
- Gültekin, K., & Enisa, M. (2023). Blended teaching readiness of EFL instructors and their perceptions about blended learning in English preparatory schools: a case from Turkey. *Journal of Research on Technology*, 1–17. <https://doi.org/10.1080/15391523.2023.2186987>
- Guma, A., Haolader, F. A., & Muhammad, K. (2013). The role of ICT to make teaching-learning effective in Higher Institutions of Learning in Uganda. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8), 4061–4073.
- Guskey, R. T. (2014). Planning Professional Learning. *Educational Leadership*, May(8), 11–16.
- 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* (Issue 25).
- Hall, D. T., & Hite, R. (2022). School-level implementation of a state-wide professional development model for developing globally competent teachers. *Teacher Development*, 26(5), 665–682.
- Hallinger, P. (2003). Leading educational change: reflections on the practice and theory of instructional and transformational leadership. *Cambridge Journal of Education*.
- Hallinger, P. (2021). Instructional leadership and school improvement: A global perspective. *Journal of Educational Administration*.
- Herawati, R., & Tjahjono, H. K. (2020). The influence of instructional

- leadership on professional competence mediated by self-efficacy and social capital. *Jurnal Manajemen Bisnis*, 11(2).
<https://doi.org/10.18196/mb.11298>
- Holdsworth, P. (2020). *Being a Teacher Educator* (1 st). Routledge.
- 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>
- Huang, F., Sánchez-Prieto, J. C., Teo, T., García-Peñalvo, F. J., Olmos-Migueláñez, S., & Zhao, C. (2021). A cross-cultural study on the influence of cultural values and teacher beliefs on university teachers' information and communications technology acceptance. *Educational Technology Research and Development*, 69(2), 1271–1297.
<https://doi.org/10.1007/s11423-021-09941-2>
- Huang, K.-P., Jane, T., Lo, S. C., & Mei-Ju, C. (2013). The review and critical analysis of the principles of Scientific Management. *The International Journal of Organizational Innovation*, 5 (4).
- Hursen, C. (2011). Technological proficiency perception assessment of teachers in vocational high schools. *Procedia - Social and Behavioral Sciences*, 28, 977–981. <https://doi.org/10.1016/j.sbspro.2011.11.180>
- Ibrahim, A. (2018). Directive, collaborative, or non-directive? Thesis supervision approaches in the United Arab Emirates. *Issues in Educational Research*, 28(3), 679–700.
- Ing, M. (2010). Using informal classroom observations to improve instruction. *Journal of Educational Administration*, Volume 48(3).

<https://doi.org/0957-8234>

- Ingleby, E., Cohen, L., Manion, L., & Morrison, K. (2012). Research methods in education. in *professional development in education* (5th ed., Vol. 55, Issue 3). RoutledgeFalmer. https://doi.org/10.1111/j.1467-8527.2007.00388_4.x
- Irina, A. (2011). Pedagogical Competences – The key to efficient education. *International Online Journal of Educational Sciences*, 3(2), 411–423.
- Isahaque, A., Azman, A., Mallick, S., Sultana, T., & Hatta, Z. A. (2022). Social survey method. In *principles of social research methodology*. Springer, Singapore. https://doi.org/https://doi.org/10.1007/978-981-19-5441-2_12
- Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). Research design: Qualitative, quantitative and mixed methods approaches (4th ed.). Thousand Oaks, CA: Sage. *English Language Teaching*, 12(5), 40. <https://doi.org/10.5539/elt.v12n5p40>
- Ismail, S. N., Don, Y., Husin, F., & Rozalina Khalid. (2018). Instructional leadership and teachers ' functional competency across the 21st century learning. *International Journal of Instruction*, 11(3), 135–152. <https://doi.org/1308-1470>
- Jelagat Yego, S., Amimo, C., & Mendoza-Role, E. (2020). Relationship between instructional supervision and teacher's performance among public secondary schools in Nandi North Sub-County, Kenya. *East African Journal of Education and Social Sciences*, 1(2), 90–97. <https://doi.org/10.46606/eajess2020v01i02.0024>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A

- research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. <https://doi.org/10.3102/0013189X033007014>
- Jonghun, K. (2018). School accountability and standard-based education reform: The recall of social efficiency movement and scientific management. *International Journal of Educational Development*, Volume 60, 80–87.
- Mutunga, K. B., Kasivu, D. G., & Cheloti, D. S. (2023). Instructional supervision as a determinant of students' academic performance in public secondary schools in Kenya. *International Journal of Management Studies and Social Science Research*, 05(02), 32–40. <https://doi.org/10.56293/ijmsssr.2022.4572>
- Kadri, K., Mansor, A. N., & Nor, M. Y. M. (2021). Principal and teacher leadership competencies and 21st century teacher learning and facilitating practices: instrument development and demographic analysis. *Creative Education*, 12(09), 2196–2215. <https://doi.org/10.4236/ce.2021.129168>
- Kagoire, T. O. K. M., Wambi, M., Buluma, A., Edwin Tusiime, W., Humphrey Gusango, E., & Senkumba, J. (2024). Teachers' autonomy in adapting pedagogical practices for effective implementation of the secondary school competency-based curriculum in Uganda. *East African Journal of Education and Social Sciences*, 5(6), 76–89. <https://doi.org/10.46606/eajess2024v05i06.0416>
- Kakar, Z. U. H., Rasheed, R., Rashid, A., & Akhter, S. (2023). Criteria for assessing and ensuring the trustworthiness in qualitative research. *International Journal of Business Reflections*, 4(2), 150–173. <https://doi.org/10.56249/ijbr.03.01.44>

- 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>
- Kang, N. H., Kang, H., Maeng, S., Park, J., & Jeong, E. (2020). Teacher competency in competency-focused science teaching in the South Korean context: Teacher self-assessment instrument development and application. *Asia-Pacific Science Education*, 6(2), 480–513.
<https://doi.org/10.1163/23641177-bja10012>
- Karia, C. T., Anderson, E., Burgess, A., & Carr, S. (2023). Peer teacher training develops “lifelong skills.” *Medical Teacher*, 373–379.
<https://doi.org/https://doi.org/10.1080/0142159x.2023.2256463>
- karnati, N. (2019). *Academic supervision to improve the competence of elementary school teachers*. 35(1).
- Kartini, D., Kristiawan, M., & Fitria, H. (2020). *The influence of principal ' s leadership , academic supervision , and professional competence toward teachers ' performance*. May.
- Kasule, Georgele, W., Wesselink, R., Noroozi, O., Mulder, M., Wilson, G., Wesselink, R., Noroozi, O., & Mulder, M. (2015). The current status of teaching staff innovation competence in Ugandan universities : perceptions of managers , teachers , and students. *Journal of Higher Education Policy and Management*, 37(3), 330–343.
<https://doi.org/10.1080/1360080X.2015.1034425>
- Kaushik, V., & Walsh, C. A. (2019). *Pragmatism as a research paradigm and its implications for social work research*.

- Kazibwe, K. (2024, September 25). Education Ministry partners with Airtel, UNICEF to give ICT skills to secondary teachers. *Nile Post*, 1. <https://nilepost.co.ug/news/218014/>
- Kazlauskienė, A., Gaučaitė, R., Cañabate, D., Colomer, J., & Bubnys, R. (2021). Sustainable development of students' assumed responsibility for their own learning during participatory action research. *Sustainability (Switzerland)*, 13(18). <https://doi.org/10.3390/su131810183>
- Khun-Inkeeree, H., Mahmood, M. H. H., Haji-Mohd-Noor, S. S., Kasa, M. D., Yaakob, M. F. M., Omar-Fauzee, M. S., & Sofian, F. N. R. M. (2020). Increasing teachers' self-efficacy through regular teaching and learning supervision. *Universal Journal of Educational Research*, 8(7), 3002–3013. <https://doi.org/10.13189/ujer.2020.080729>
- Kilag, O. K. T., & Sasan, J. M. (2023). Unpacking the role of instructional leadership in teacher professional development. *Advanced Qualitative Research*, 1(1), 63–73.
- Kimathi, L., Njoroge, C., & Muriuki, H. (2024). Barriers to effective instructional supervision in public secondary schools. *East African Educational Review*.
- Kinser-Traut, J. Y., & Marx, R. W. (2022). Designing a regional teacher professional development enterprise. *Frontiers in Education*, 7(April). <https://doi.org/10.3389/educ.2022.862373>
- Klockner, K., Shields, P., Pillay, M., & Ames, K. (2020). Pragmatism as a teaching philosophy in the safety sciences: A higher education pedagogy perspective. *Safety Science*, 138(105095). <https://doi.org/https://doi.org/10.1016/j.ssci.2020.105095>

- Komakech, R. A., & Osuu, J. R. (2014). *Uganda SESEMAT Programme : Impact and Challenges in its Implementation*. 2(6), 133–146.
- Körkkö, M., Kotilainen, M. R., Toljamo, S., & Turunen, T. (2022). Developing teacher in-service education through a professional development plan: modelling the process. *European Journal of Teacher Education*, 45(3), 320–337. <https://doi.org/10.1080/02619768.2020.1827393>
- Kothari, C, R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International (P) Limited Publishers.
- Kruger, W., & Pienaar, J. (2020). Continuing professional development (CPD): A necessary component in the workplace or not ? *Journal of Medical Laboratory Science & Technology of South Africa*, July. <https://doi.org/10.36303/JMLSTSA.2020.2.1.9>
- Kule, A. M. (2021). Teacher characteristics and the Use of ICT in Rural Secondary Schools in Bwera Sub County , Kasese District ,. *Interdisciplinary Journal of Rural and Community Studies*, 3(2), 30–40. <https://doi.org/10.51986/ijrcs-2021.vol3.02.04>
- Kulgemeyer, C., Kempin, M., Weißbach, A., Borowski, A., Buschhüter, D., Enkrott, P., Reinhold, P., Riese, J., Schecker, H., Schröder, J., & Vogelsang, C. (2021). Exploring the impact of pre-service science teachers' reflection skills on the development of professional knowledge during a field experience. *International Journal of Science Education*, 43(18), 3035–3057. <https://doi.org/10.1080/09500693.2021.2006820>
- Kumar, R. (2014). *Research Methodology: A Step-by-Step Guide for Beginners*. SAGE Publications. <https://books.google.co.ug/books?id=MKGVAgAAQBAJ>
- Kyngäs, H., Kääriäinen, M., & Elo, S. (2020). The trustworthiness of content

- analysis. In Kyngäs, H., Mikkonen, K., Kääriäinen, M. (eds) *The application of content analysis in Nursing Science Research*. Springer, Cham. https://doi.org/https://doi.org/10.1007/978-3-030-30199-6_5
- Lamb, J. (2017a). How do teachers reflect on their practice? A study into how feedback influences teachers' reflective practice. *The STeP Journal*, 4(4), 94–104.
<https://ojs.cumbria.ac.uk/index.php/step/article/download/427/549>
- 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.
<http://swepub.kb.se/bib/swepub:oai:bth.se:forskininfo6DC42C7F202024C3C12575390037E3E4?vw=full&tab2=abs>
- Leoste, J., Lavicza, Z., Fenyvesi, K., Tuul, M., & Öun, T. (2022). Enhancing digital skills of Early Childhood teachers through Online Science, Technology, Engineering, Art, Math Training Programs in Estonia. *Frontiers in Education*, 7(May). <https://doi.org/10.3389/feduc.2022.894142>
- Leslie S., K., Icon Raffaella, D., & Hudon, K. (2020). Supporting teachers as they support each other:Lessons concerning mentor teacher feedback to teacher mentees. *Professional Development in Education*, 49(2), 225–242. <https://doi.org/https://doi.org/10.1080/19415257.2020.1839781>
- Linh, D. N., & Kasule, G. W. (2022). Status of professional learning communities in developing countries: Case of Vietnam and Uganda. *International Journal of Evaluation and Research in Education*, 11(1), 61–68. <https://doi.org/10.11591/ijere.v11i1.21717>

- Lizzio, A., & Wilson, K. (2008). Feedback on assessment: Students' perceptions of quality and effectiveness. *Assessment and Evaluation in Higher Education*, 33(3), 263–275.
<https://doi.org/10.1080/02602930701292548>
- MacPhail, A., Ulvik, M., Guberman, A., Czerniawski, G., & Helma Oolbekkink-Marchand, Y. B. (2019). The professional development of higher education-based teacher educators: Needs and realities, professional development in education. *Professional Development in Education*, 45:5, 848-.
- Madisa, & Suariah. (2019). The influence of the principal leadership on the teacher teaching performance in improving the quality of graduates. *JPSD*, 5(2), 1297–1306.
- Mahlambi, S. B., van den Berg, G., & Mawela, A. S. (2022). Exploring the use of assessment for learning in the mathematics classroom. *Journal of Education (South Africa)*, 89, 23–46. <https://doi.org/10.17159/2520-9868/i89a02>
- Majid, I. (2020). ICT in Assessment: A Backbone for Teaching and Learning Process. *UIJRT | United International Journal for Research & Technology* |, 01(03), 3. <https://www.doi.org/10.5281/zenodo.576047>.
- 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(30), 177–187.
- Mandal, S. (2018). *The competencies of the Modern Teacher*. 10.
- Männistö, M., Mikkonen, K., Vuopala, E., Kuivila, H. M., Virtanen, M.,

- Kyngäs, H., & Kääriäinen, M. (2019). Effects of a digital educational intervention on collaborative learning in nursing education: A quasi-experimental study. *Nordic Journal of Nursing Research*, 39(4), 191–200. <https://doi.org/10.1177/2057158519861041>
- 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>
- Mariscal, L. L., Albarracin, M. R., Mobo, F. D., & Cutillas, A. L. (2023). Pedagogical competence towards technology-driven instruction on Basic Education. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(5), 1567–1580. <https://doi.org/10.11594/ijmaber.04.05.18>
- Maritasari, D. B., Setyosari, P., Kuswandi, D., & Praherdhiono, H. (2020). The effect of training and supervision on teacher performance through teacher competence as a mediating variable in primary schools. *Universal Journal of Educational Research*, 8(11 C), 105–112. <https://doi.org/10.13189/ujer.2020.082312>
- Martyn, D. (2007). *The Good Research Guide research projects for small-scale* (3rd ed.). Open University Press.
- May, H., & Supovitz, J. A. (2011). The scope of principal efforts to improve instruction. *Educational Administration Quarterly*, 47(2), 332–352. <https://doi.org/10.1177/0013161X10383411>
- Megheirkouni, M., & Moir, J. (2023). Simple but effective criteria: rethinking

- excellent qualitative research. *Qualitative Report*, 28(3), 848–864.
<https://doi.org/10.46743/2160-3715/2023.5845>
- Mensah, S., & Osei, K. (2022). Instructional leadership in West African contexts: implications for teacher development. *African Journal of Educational Research*.
- Merdekawati, K. (2022). Peer feedback impact on teaching skills. *The 4th International Seminar on Chemical Education (ISCE) 2021*, 2645(1).
<https://doi.org/https://doi.org/10.1063/5.0113866>
- Miles, D. A. (2014). A Taxonomy of Research gaps : Identifying and defining the seven research gaps. *doctoral student workshop: Finding Research Gaps - Research Methods and Strategies*, 2017, 1–10.
- MOES. (2019). The National Teacher Policy. In *The Lancet*. Ministry of Education and Sports. [https://doi.org/10.1016/S0140-6736\(54\)91203-9](https://doi.org/10.1016/S0140-6736(54)91203-9)
- Mohammed, Y., Yusuf, A., & Mbitsa, I. M. (2015). *Relevance of instructional supervision in the effective teaching and learning in Nigeria Universal Basic education school system*. 5(4), 22–26.
<https://doi.org/10.9790/7388-05432226>
- Moreira, J. A., Nunes, C. S., & Casanova, D. (2023). Digital competence of higher education teachers at a distance learning University in Portugal [Competencia Digital de Profesores de Educación Superior en una Universidad de Educación a Distancia en Portugal]. *Computers*, 12(169), 1–20. <https://doi.org/10.3390/computers12090169>
- 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>

- Muda, H., Loganathan, N., Awang, Z., Badrul, N. S., Ali, M. H., & Baba, Z. S. (2020). Expert review and pretesting of behavioral supervision in higher education. *Journal of Applied Research in Higher Education*, 12(4), 767–785. <https://doi.org/https://doi.org/10.1108/jarhe-02-2019-0029>
- Mudzofir, & Mudawali. (2017). *Relationship between instructional supervision and professional development : Perceptions of secondary school teachers and Madrasah Tsanawiyah (Islamic Secondary School) Teachers in Lhokseumawe , Aceh , Indonesia* (Issue March). Tanmpere, Indonesia.
- Mugenda, Q. M., & Mugenda, A. G. (2009). *Research methods: Quantitative and qualitative approaches*. ACTS Press.
- Muhammad, K., Barigayomwe, R., Zulaika, N., & Daphine, A. (2022). The efficiency of records management in selected private and public secondary schools in urban districts of Central Uganda. *East African Journal of Education Studies*, 5(4), 141–152. <https://doi.org/10.37284/eajes.5.4.996>
- Mukhula, J., Gideon, Manyiraho, D., Zami Atibuni, D., & Kani Olema, D. (2021). ICT adoption readiness and ICT policy implementation in secondary schools in Mayuge district, Uganda. *American Journal of Educational Research*, 9(8), 479–487. <https://doi.org/10.12691/education-9-8-3>
- Mulder, M. (2014). *Conceptions of professional competence*. 1–22.
- Muñiz-rod r guez, L., Alonso, P., & Rodr guez-mu niz, L. J. (2017). Developing and validating a competence framework for secondary

- mathematics student teachers through a Delphi method. *Journal of Education for Teaching*, 7476, 0.
<https://doi.org/10.1080/02607476.2017.1296539>
- Muranda, A. Z. (2018). Models of instructional supervision that instructional supervisors can use to promote effective teaching and high pupil achievement. *Cross-Currents: An International Peer-Reviewed Journal on Humanities & Social Sciences*, 4(3), 38–42.
<https://doi.org/10.36344/ccijhss.2018.v04i03.005>
- Murkatik, K., Harapan, E., & Wardiah, D. (2020). The influence of professional and pedagogic competence on teacher's performance. *Journal of Social Work and Science Education*, 1(1), 58–69.
<https://doi.org/10.52690/jswse.v1i1.10>
- Mutua, K., & Kiilu, D. (2023). Linking professional development and instructional supervision: A Kenyan Case Study. *Education & Leadership Review*.
- Muweesi, C., Lou, S., Nakonde, J., Jerome, K. S., Tomusange, R., & Sserwadda, L. (2021). Discourses in ICT integration: Pedagogical orientations in selected city primary schools in Uganda. *Educational Research and Reviews*, 16(5), 172–180.
<https://doi.org/10.5897/err2020.4103>
- Mwawasi, F. M. (2014). Technology leadership and ICT use : Strategies for capacity building for ICT integration. *Journal of Learning for Development (JL4D)*, 1(2), 1–9.
- Nabwire, M. (2014). *Supervision and teachers' performance in selected secondary schools in Mukono district, Uganda* [Kyambogo University].

<https://hdl.handle.net/20.500.12504/1625>

- Namae, S. M. (2020). *Status and use of Information Communication Technology in Uganda secondary schools: teachers' competencies, challenges, dispositions, and perceptions* (Issue August). University of British Columbia, Vancouver.
- Natalie, O., & Deanna, G.-S. (2021). *In-depth interviewing Author In-Depth Interviewing*. Springer.
- Ndawula, S., Kahuma B, J., & Yawe, M. J. (2013). *Getting schools ready for integration of pedagogical ICT : The experience of secondary schools in Uganda*. 3(2), 46–61.
- Nessipbayeva, O. (2012). The competencies of the modern teacher. *Bulgarian Comparative Education Society.*, 148–154.
- Neyra, G. P. S., Fuster-Guillén, D., Tataje, F. A. O., & Castro, A. S. (2021). Management of pedagogical supervision and teacher performance in the teaching of English in Peru. *International Journal of Early Childhood Special Education*, 13(2), 421–432. <https://doi.org/10.9756/INT-JECSE/V13I2.211079>
- Ng, D. T. K., Leung, J. K. L., Su, J., Ng, R. C. W., & Chu, S. K. W. (2023). Teachers' AI digital competencies and twenty-first century skills in the post-pandemic world. *Educational Technology Research and Development*, 71(1), 137–161. <https://doi.org/10.1007/s11423-023-10203-6>
- Nguyen, D., Ng, D., Luo, W., & Mansor, S. (2020). Exploring the relationships between instructional leadership and teacher competences : Singapore primary school teachers ' perceptions. *International Journal of*

Leadership in Education, 00(00), 1–22.

<https://doi.org/10.1080/13603124.2020.1731765>

Nguyen, Q. N. (2021). Revisiting peer classroom observations as a teacher professional development protocol: A critical theoretical review of global practices. *Vietnam Journal of Education*, 5(2), 10–20. <https://doi.org/10.52296/vje.2021.71>

Ngwenya, V. C. (2020). School-based supervision enhances the professional development of teachers. *South African Journal of Education*, 40(3), 1–10. <https://doi.org/10.15700/saje.v40n3a1744>

Niemi, H., Nevgi, A., & Aksit, F. (2016). Active learning promoting student teachers' professional competences in Finland and Turkey. *European Journal of Teacher Education*, 9768, 0. <https://doi.org/10.1080/02619768.2016.1212835>

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

Norhagen, S. L., Krumsvik, R. J., & Røkenes, F. M. (2024). Developing professional digital competence in Norwegian teacher education: a scoping review. *Frontiers in Education*, 9(April), 1–25. <https://doi.org/10.3389/educ.2024.1363529>

Ntege, J. L., Kasule, G. W., Owino, P., & Mugizi, W. (2023). Effect of the directive and non-directive inspection approaches on teacher instructional effectiveness in government-aided primary schools in Nakisunga County, Uganda. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(5), 1555–1566. <https://doi.org/10.11594/ijmaber.04.05.17>

- Nyakundi, G. M. (2020). *Influence of competence on performance of teachers in public secondary schools in Kisii County-Kenya*. 11(3), 173–180.
- Odama, J. (2019, September 2). *Head teachers to blame for poor performance in Arua schools*. <https://www.westnileweb.com/news-a-analysis/arua/head-teachers-to-blame-for-poor-performance-in-schools>
- OECD. (2013). *Teachers for the 21st Century: Using evaluation to improve teaching. background report for the 2013 international summit on the teaching profession*.
- Okia, H. S., Kasule, G. W., & Naluwemba, F. (2021). Support supervision and performance of primary school teachers in Uganda. *International Journal of Education and Social Science Research*, January 2021. <https://doi.org/10.37500/IJESSR.2021.4309>
- Okiror, J. J., Hayward, G., & Winterbottom, M. (2017). Towards in-service training needs of secondary school agriculture teachers in a paradigm shift to outcome-based education in Uganda. *The Journal of Agricultural Education and Extension*, 21(11), 1–12. <https://doi.org/10.1080/1389224X.2017.1338593>
- Okumu, J. B., Ogwang, T. H., & Wafula, W. S. (2021). Mentoring and teacher effectiveness in government-aided secondary schools in the Acholi Sub region in Uganda. *Creative Education*, 12(11), 2700–2714. <https://doi.org/10.4236/ce.2021.1211200>
- Okunia, L., Ayikoru, J., & Naluwemba, F. (2019). *School culture and teacher motivation: a case of secondary schools in Arua Municipality, Arua District, Uganda* (Issue November). Kyambogo University.
- Olarewaju, A. D., & Olusoji, G. J. (2014). *Management theories and its*

application in organisations: The Nigerian Experience.

- Oliva, Á. D., Martín, R., & Franco, E. P. (2016). Teaching competences necessary for developing key competences of primary education students in Spain : teacher assessments. *Teacher Development*, 20(1), 124–147. <https://doi.org/10.1080/13664530.2015.1101390>
- Olorode, O. A., & Adeyemo, A. O. (2012). *Educational supervision: Concepts and practices with reference to Oyo state, Nigeria*. 20(1), 1–9.
- Onen, D. (2016). Appropriate conceptualisation: The foundation of any solid quantitative research. *Electronic Journal of Business Research Methods*, 14(1), 28–38.
- Orakova, A., Nametkulova, F., Issayeva, G., Mukhambetzhanova, S., Galimzhanova, M., & Rezuanova, G. (2024). The relationships between pedagogical and technological competence and digital literacy level of teachers. *Journal of Curriculum Studies Research*, 6(1), 1–21. <https://doi.org/10.46303/jcsr.2024.2>
- Oryema, F. (2017). *Supervision of teaching and teachers' performance in government - aided secondary schools in Moyo district, Northern Uganda* [Uganda Management institute]. 5ade12f1d2e1
- Otto, G. (2018). *The roles of internal instructional supervision in enhancing teacher effectiveness: A case study of two primary schools in Pader District*. Aga Khan University.
- Otyola, R. W., Nalwadda, P., Wamani, G., Bukenya, J., Kamaga, E., Bantebya, S., Otyola, R. W., Nalwadda, P., & Bagamba, G. W. (2022). Examining the uccesses of Universal Primary Education and Universal Secondary Education Policies in Uganda. *American Journal of*

- 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>
- Pa, N. (2023). *Instructional supervision and professional learning communities : A school- based professional growth initiative. February.* <https://doi.org/10.13140/RG.2.2.25468.82560>
- Parviainen, P., Eklund, K., Koivula, M., Liinamaa, T., & Rutanen, N. (2024). Enhancing teachers' pedagogical awareness of teaching Early Mathematical skills—a mixed methods study of tailored professional development program. *Early Education and Development*, 35(5), 1103–1125. <https://doi.org/10.1080/10409289.2024.2336661>
- Pass, P. (2020). Benefits of boredom: An “interlopers” experience of conducting participant observation on the production line Short title: Boredom on the production line Sarah Pass. *European Management Review*, 17(1), 285–295. <https://doi.org/10.1111/emre.12393>
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (illustrate). SAGE Publications. <https://books.google.co.ug/books?id=FjBw2oi8El4C>
- Perry, R. R., Scherie, L., & Penny, G. (2000). Department chair online resource center supervising your faculty with a differentiated model. *Ace*, 11(2), 1–5.

- Pogolşa, L., & Victoria, P. (2022). Teaching professional competence – an indication of performance and efficiency in the process of professionalizing teaching career. *Universe Pedagogic*, 73(1), 14–18. <https://doi.org/10.52387/1811-5470.2022.1.02>
- Pongkendek, J., Nurvitasari, E., & Firmansyah, A. (2021). The effect of Edmodo-based blended learning on students' achievement. *J-PEK (Jurnal Pembelajaran Kimia)*, 6(2), 79–86. <https://doi.org/10.17977/um026v6i22021p079>
- Porro, S. G., Yiga, A. P., Enon, J. C., Mwosi, F., & Eton, M. (2018). Teacher competence and performance in primary schools in Nwoya District, Northern Uganda. *International Journal of Advanced Educational Research, Accepted*, 5–12. www.educationjournal.org
- Puroila, A. M., Kupila, P., & Pekkarinen, A. (2021). Multiple facets of supervision: Cooperative teachers' views of supervision in early childhood teacher education practicums. *Teaching and Teacher Education*, 105. <https://doi.org/10.1016/j.tate.2021.103413>
- Purvi, S., Sreedhar, M., & Laverie, D. A. (2019). Developing and demonstrating effective pedagogy in Marketing Education: Pedagogical competence as an organizing framework for teaching portfolios. *Marketing Education Review*, 29(4), 283–304.
- Putra, S. P., & Hariri, H. (2023). The effect of principal supervision on teacher performance: literature review. *Jurnal Humaniora Dan Ilmu Pendidikan*, 2(2), 63–70.
- Range, B. G., Young, S., & Hvidston, D. (2013). *Teacher perceptions about observation conferences : what do teachers think about their formative*

supervision in one US school district? 2434.

<https://doi.org/10.1080/13632434.2012.724670>

Rankine, M. (2019). The ‘thinking aloud’ process : A way forward in social work supervision. *Reflective Practice*, 00(00), 1–14.
<https://doi.org/10.1080/14623943.2018.1564651>

Redjeki, H., Sukirman, & Santoso. (2021). Education and training technology increases teacher competence. *Journal of Physics: Conference Series*, 1823(1). <https://doi.org/10.1088/1742-6596/1823/1/012082>

Rehman Ghazi, S., Nauman Shabbir, M., Batool, J., & Ullah, I. (2016). Role of teacher’s attitude and attribute in fostering students’ self esteem. *Journal of Elementary Education*, 26(1), 99–110.

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”*.

Republic of Uganda. (2010). *Value for Money Audit Report on Inspection of Primary Schools by The Ministry of Education and Sports* (Issue March).

Riggs, D. W. (2017). Qualitative research in Clinical and Health Psychology. *Qualitative Research in Clinical and Health Psychology*, March.
<https://doi.org/10.1007/978-1-137-29105-9>

Roelofs, E. (2007). *Towards a framework for assessing teacher competence*. 40.

Roelofs, E. C., & Sanders, P. (2007). Towards a framework for assessing teacher competence. *European Journal of Vocational Training*, 40(1), 123–139.

- Rukundo, A., & Bashaija, A. (2022). Prioritisation and nationalisation of teaching of Sciences in Ugandan Schools: Practitioners and documentary Perspectives. *Interdisciplinary Journal of Education Research*, 4, 15–27. <https://doi.org/10.51986/ijer-2022.vol4.02>
- Rury, J. (2005). *Education and Social Change* (2nd ed.). RoutledgeF. <https://doi.org/https://doi.org/10.4324/9781410611802>
- Ruth, D. R., & Anyaogu, O. (2016). Creating conducive learning environment and management: a panacea for effective learning and creativity in schools. *International Journal of Academia*, 2(1), 2505–0540.
- Sandberg, J., & Pinnington, A. H. (2009). *Professional competence as ways of being: An Existential Ontological Perspective*. November. <https://doi.org/10.1111/j.1467-6486.2009.00845.x>
- Scardamalia, M. (2014). *Draft White Paper 4 New assessments and environments for knowledge building* (Issue September). <https://doi.org/10.1007/978-94-007-2324-5>
- Shagofah, N., Omid, T., & Golzar, J. (2022). Simple random sampling. *Introduction to survey sampling*, December, 9–16. <https://doi.org/10.4135/9781412984683.n2>
- Shehata, M. (2019). Using flipped learning for enhancing Faculty of Education English majors' reflective teaching skills and learning autonomy. *Journal of Research in Curriculum Instruction and Educational Technology*, 4(4), 37–80. <https://doi.org/10.21608/jrciet.2019.31955>
- Shelly, C. S., Nuraida, I., & Oktaviana, F. (2020). An analysis of teacher pedagogical competence in teaching English at SMK PGRI 3 Kota Serang. *Journal of English Language Teaching and Literature (JELTL)*,

3(1), 54–65. <https://doi.org/10.47080/jeltl.v3i1.787>

- 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>
- Silva, D. Y., & Dana, N. F. (2001). Collaborative supervision in the professional development school. *Journal of Curriculum and Supervision*, 16(4), 305–321.
- Simon, D. J., Swerdlik, M. E., Newman, D. S., Banks, B. M., Silva, A., & Cruise, T. K. (2020). *Clinical supervision, support, and professional development for school psychologists across the career lifespan* (1 St Editi). Routledge.
- Singerin, S. (2021). Collaboration-based academic supervision model with peer evaluation approach to improve pedagogical competence and quality of school performance: The role of principal's motivation as moderation variables. *International Journal of Elementary Education*, 5(2), 268. <https://doi.org/10.23887/ijee.v5i2.34073>
- Sonia, N. R. (2022). Supervisi Pengembangan Mutu Pendidikan: Tinjauan Konsep Developmental Supervision Glickman. *Southeast Asian Journal of Islamic Education Management*, 3(1), 103–122. <https://doi.org/10.21154/sajiem.v3i1.97>
- Ssebunya, A. F., Karim, H. A., & Nsereko, Z. N. (2023). Transforming education : the role of instructional supervision. *Top Educational Review Journal*, 14(3), 21–27.
- Ssekamwa, J. ., & Lugumba, S. M. E. (2001). *Development and*

- Administration of Education in Uganda* (2nd ed.). Fountain Publishers.
- Ssekamwa, J. C. (1997). *History and development of education in Uganda* (2nd, illustrated.). 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>
- 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>
- Subandi, S., Ahmadi, A., Amiruddin, A., Mispani, M., Hadiyati, E., & Saregar, A. (2020). Science teacher' leadership styles and competencies from the perspective of high school students: A path analysis study. *Journal for the Education of Gifted Young Scientists*, 8(4), 1535–1545. <https://doi.org/10.17478/jegys.831070>
- Sule, M. A., Ameh, E., & Egbai, M. E. (2015). Instructional supervisory practices and teachers' role effectiveness in public secondary schools in calabar south local government area of Cross River State, Nigeria. *Journal of Education and Practice*, 6(23), 43–47.
- Summaya, E., & Aisha, K. (2011). Collaborative reflection on shared journal writing to foster EFL teacher CPD. *Cypriot Journal of Education*, 2(2), 61–74.
- Sumrin, S., & Gupta, S. (2021). Establishing validity and reliability in case study research projects. In *The Routledge Companion to Marketing Research* (p. 13). Routledge.

- Supermane, S. (2019). Transformational leadership and innovation in teaching and learning activities: the mediation effect of knowledge management. *Information Discovery and Delivery*, 47(4), 242–250. <https://doi.org/10.1108/IDD-05-2019-0040>
- Surayya, E., & Sumirah, S. (2021). The role of principal supervision in improving teacher performance. *International Journal of Southeast Asia*, 2(1), 28–35. <https://doi.org/10.47783/journijsa.v2i1.199>
- Suwardi, S., Suyatno, S., & Arikunto, S. (2020). The effectiveness of a collaborative academic supervision model of principal and senior teachers in improving junior teachers' academic supervision competence. *Universal Journal of Educational Research*, 8(12A), 7218–7226. <https://doi.org/10.13189/ujer.2020.082503>
- Tai, J., Ajjawi, R., & Umarova, A. (2021). How do students experience inclusive assessment? A critical review of contemporary literature. *International Journal of Inclusive Education*, 0(0), 1–18. <https://doi.org/10.1080/13603116.2021.2011441>
- Tang, S. Y. F., Wong, A. K. Y., Li, D. D. Y., Cheng, M. M. H., Tang, S. Y. F., Wong, A. K. Y., Li, D. D. Y., & Cheng, M. M. H. (2021). Research papers in education: Re-conceptualising professional competence development of student teachers in initial teacher education of student teachers in initial teacher education. *Research Papers in Education*, 36(2), 152–175. <https://doi.org/10.1080/02671522.2019.1633563>
- Tayebwa, E. (2022). Utilization of teacher supervision tool in influencing teacher effectiveness in secondary schools in Rukungiri District–Uganda. *International Journal of Educational Policy Research and Review*, 8(4),

146–157.

<https://idr.kab.ac.ug/handle/20.500.12493/640%0Ahttps://idr.kab.ac.ug/bitstream/handle/20.500.12493/640>

Thi, N., Nguyen, L., & Rice, M. F. (2023). *How to develop four competencies for teacher educators*. April, 1–13. <https://doi.org/10.3389/feduc.2023.1147143>

Thille, P. H., Rotteau, L., & Webster, F. (2021). More than words: Methods to elicit talk in interviews. *Family Practice*, 38(4), 545–547. <https://doi.org/10.1093/fampra/cmab043>

Thobega, M., & Miller, G. (2008). Perceptions of supervision practices by Agricultural education student teachers. *Journal of Agricultural Education*, 49(3), 65–75. <https://doi.org/10.5032/jae.2008.03065>

Thomas R. Guskey. (2014). Planning Professional Learning. *Educational Leadership*, May(8), 11–16.

Thoonen, E. E. J., Slegers, P. J. C., Oort, F. J., Peetsma, T. T. D., & Geijsel, F. P. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly*, 47(3), 496–536. <https://doi.org/10.1177/0013161X11400185>

Tiainen, O., & Lutovac, S. (2022). Examining peer group mentoring in teaching practicum and its impact on the process of pre-service teachers' joint reflection. *European Journal of Teacher Education*, 00(00), 1–19. <https://doi.org/10.1080/02619768.2022.2122807>

Tondeur, J., Howard, S., Van Zanten, M., Gorissen, P., Van der Neut, I., Uerz, D., & Kral, M. (2023). The HeDiCom framework: Higher Education teachers' digital competencies for the future. *Educational Technology*

Research and Development, 71(1), 33–53. <https://doi.org/10.1007/s11423-023-10193-5>

Tovar Viera, R., & Velasco SÃ¡nchez, D. I. (2020). Research on Technology Competencies in EFL Language instructors: Technology-Pedagogy-Content in Language teaching. *Script Journal: Journal of Linguistics and English Teaching*, 5(1), 32–43. <https://doi.org/10.24903/sj.v5i1.414>

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

Usman, Y. D. (2015). *The Impact of Instructional Supervision on Academic Performance of Secondary School Students in Nasarawa State* ,. 6(10), 160–168.

Venessa, J. S., & Bryan, C. (2024). Teaching Competence and Information and Communication Technology Integration (ICT) of Private Schools in Davao City. *International Journal of Innovative Science and Research Technology (IJISRT)*,9(4),1481–1510. <https://doi.org/10.38124/ijisrt/ijisrt24apr1670>

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>

Wakasa, D. B. (2023). *Collaborative peer supervision in enhancing the effectiveness of teachers of English language in public secondary schools in Kakamega county, Kenya*D. University of Eldoret.

Wamala, R., & Seruwagi, G. (2012). Teacher competence and the academic achievement of sixth grade students in Uganda. *Journal of International*

Education Research (JIER), 9(1), 83–90.

<https://doi.org/10.19030/jier.v9i1.7503>

Wangari, M., Otieno, L., & Barasa, B. (2023). *Instructional leadership and teaching quality in East Africa: A Multi-Case Study*.

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>

Warwick, L., Beddoe, L., Leigh, J., Disney, T., Ferguson, H., & Cooner, T. S. (2023). The power of relationship-based supervision in supporting social work retention: A case study from long-term ethnographic research in child protection. *Qualitative Social Work*, 22(5), 879–898. <https://doi.org/10.1177/14733250221113015>

Wayne, H. K., & Forsyth, P. (2009). *Effective Supervision: Theory Into Practice*. Random House, 1986.

Weymes, E. (2004). A challenge to traditional management theory. *Foresight*, 06(06), 338–348. <https://doi.org/https://doi.org/10.1108/14636680410569911>

Wiersema, M. F., & Bowen, H. P. (2009). The use of limited dependent variable techniques in strategy research: Issues and methods. *Strategic Management Journal*, 30(6), 679–692. <https://doi.org/https://doi.org/10.1002/smj.758>

Wilke, A. M., Green, D. P., & Tan, B. (2022). Encouraging community action against teacher absenteeism: A mass media experiment in rural Uganda. *Journal of Development Studies*, 58(5), 915–930. <https://doi.org/10.1080/00220388.2021.2008367>

- Wilson, E. (2009). *School-based research: a guide for education students* (1st ed). 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>
- Wolterinck, C., Poortman, C., Schildkamp, K., & Visscher, A. (2022a). Assessment for Learning: developing the required teacher competencies. *European Journal of Teacher Education*, 00(00), 1–19.
<https://doi.org/10.1080/02619768.2022.2124912>
- Wolterinck, C., Poortman, C., Schildkamp, K., & Visscher, A. (2022b). Assessment for Learning: developing the required teacher competencies. *European Journal of Teacher Education*, 00(00), 1–19.
<https://doi.org/10.1080/02619768.2022.2124912>
- Wubbels, T., Brok, P. Den, Veldman, I., Tartwijk, J. Van, Wubbels, T., Brok, P. Den, Veldman, I., Tartwijk, J. Van, Wubbels, T., Brok, P. Den, Veldman, I., & Van, J. (2007). *Teacher interpersonal competence for Dutch secondary multicultural classrooms Teacher interpersonal competence for Dutch secondary multicultural*. 0602.
<https://doi.org/10.1080/13450600600644269>
- Yang, X., Kaiser, G., König, J., Blömeke, S., Yang, X., Kaiser, G., König, J., Blömeke, S., Kaiser, G., & König, J. (2018). *Measuring Chinese teacher professional competence : adapting and validating a German framework in China Measuring Chinese teacher professional competence : adapting and validating a German framework in China*. 0272.

<https://doi.org/10.1080/00220272.2018.1502810>

Yara, P. O., & Otieno, K. O. (2010). Teaching/learning resources and academic performance in mathematics in secondary schools in Bondo District of Kenya. *Asian Social Science*, 6(12).
<https://doi.org/10.5539/ass.v6n12p126>

Ybnu Taufan, M. (2022). Teacher professional development, competencies, educational facilities, and infrastructure on teacher performance and student learning achievement. *Golden Ratio of Social Science and Education*, 2(1), 24–38.

<https://goldenratio.id/index.php/grsse/article/view/168>

Zemlyanskaya, E. N. (2020). *Formative assessment of educational achievements of students in primary education: Teacher Training*. 82–91.
<https://doi.org/10.15405/epes.20121.10>

Zepeda, C. D., Martin, R. S., & Butler, A. C. (2020). Motivational strategies to engage learners in desirable difficulties. *Journal of Applied Research in Memory and Cognition*, 9(4), 468–474.
<https://doi.org/10.1016/j.jarmac.2020.08.007>

Zepeda, S. J., Alkaabi, A. M., & Tavernier, M. D. (2020). Leadership and supervision. *Oxford Research Encyclopedia of Education*.
<https://doi.org/https://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-617>

Zhao, Y., & Ko, J. (2020). How do teaching quality and pedagogical practice enhance vocational student engagement? A mixed-method classroom observation approach. *International Journal of Educational Management*, 34 (6), 987–1000. <https://doi.org/https://doi.org/10.1108/IJEM-11-2019-0393>

APPENDICES

Appendix 1 : Reliability Test Results for Questionnaire

OVERALL RELIABILITY STATISTICS

Reliability Statistics

Cronbach's Alpha	N of Items
.814	47

INSTRUCTIONAL SUPERVISION

DIRECTIVE SUPERVISION

Reliability Statistics

Cronbach's Alpha	N of Items
.730	5

COLLABORATIVE SUPERVISION

Reliability Statistics

Cronbach's Alpha	N of Items
.801	5

NON-DIRECTIVE SUPERVISION

Reliability Statistics

Cronbach's Alpha	N of Items
.740	5

TEACHER COMPETENCE

LEADERSHIP COMPETENCE

Reliability Statistics

Cronbach's Alpha	N of Items
.881	8

PROFESSIONAL LEARNING COMPETENCE

Reliability Statistics

Cronbach's Alpha	N of Items
.793	8

ASSESSMENT COMPETENCE

Reliability Statistics

Cronbach's Alpha	N of Items
.870	8

TECHNOLOGICAL COMPETENCE

Reliability Statistics

Cronbach's Alpha	N of Items
.871	8

Appendix 2 : Interview Schedule for Head Teacher and Deputy Head Teacher in Charge of Academics

A date for the interview was agreed upon. This will preferably be during weekdays. The purpose of the study and ethical issues were explained to the participants. The session was for 45 – 60 minutes. Voice recording was used as evidence.

A. Background information

1. How many years have you served as a head teacher?
2. What is your highest professional qualification?

B. Teacher competence

As a head teacher, you are accountable for quality teaching and learning in your school.

1. What is your description of a competent secondary teacher? (Probe: knowledge, skills and attitudes they are required to possess in and out of class)

(Probe: leadership (Managing teaching/learning process); Assessment; technological competence)
2. Which of these teacher competencies are inadequate in teachers in your school?
3. (Probe: leadership (Managing teaching/learning process); Assessment; technological competence and working with colleagues)

C. Dimensions of instructional supervision

1. How do you support teachers in your school to perform to their maximum? (Probe supervision).

4. How do you communicate your feedback after lesson observation to novice or struggling teachers? (Probe: dictate? Suggest? Dialogue or empower them to make decisions?) Why?

5. How do you communicate your feedback after lesson observation to the Expert teachers? (Probe: dictate? Suggest? Dialogue or empower them to make decisions?) Why?

D. Relationship between instructional supervision and teacher competence

As a supervisor, you hold supervision conferences with the teacher:

1. What happens to the teacher's competence (knowledge, skills and attitudes) if you direct/dictate to him/her what to do in the subsequent lesson?

2. What happens to the teacher's competence if you suggest alternatives for the teacher to choose from in the subsequent lesson?

3. What happens to the teacher's competence if you empower them to make their own decisions in the subsequent lesson?

5. What challenges do you face in carrying out instructional supervision for your teachers?

6. How can instructional supervision be improved in secondary schools?

Appendix 3: Non-Participant Lesson Observation Schedule

Part A: Classroom Practice Observation Schedule

The purpose of the lesson observation schedule is to explore the teacher's competence status as observed during the lesson. The schedule is divided into school and teacher data and classroom observation sheets.

School and teacher data

In this section, write the details of the school and teacher whose lesson is being observed. *Complete this section before you go to the classroom.*

Observer Name: _____

School ID: _____

Teacher ID: _____

Teacher Gender: Male _____ Female _____

Teaching experience: _____ (Years)

Grade of learners being taught: S1 _____ S2 _____ S3

_____ S4 _____ S5 _____ S6 _____

Subject being taught: _____

Date of observation: _____

Classroom observation sheet

Time lesson starts: _____

Time lesson ends: _____

For the entire duration of the lesson, the observer will rate the lesson using the following rating scales: **Outstanding (4); Good (3); Satisfactory (2); Unsatisfactory (1)**

Definition of the Competence Levels

Outstanding (4): The teacher has demonstrated a high level of competence. The teacher is a model of excellence in classroom practices.

Good (3): The teacher demonstrated a fair level of competence. The teacher requires close mentorship to improve on a few aspects of teaching.

Satisfactory (2): The teacher demonstrated low competence in most aspects of teaching. The teacher needs more direct supervision.

Unsatisfactory (1): The teacher demonstrated a very low level of competence. The teacher needs coaching on specific teaching areas by the supervisor or senior colleagues.

Section A: Please rate each task by putting a tick ✓ on the scale that correspondence with how a teacher portrayed the competence stated

CODE	Statements The teacher;	1	2	3	4
A.1	Leadership competence				
A.1.1	communicates explicit expectations for student learning				
A.1.2	structure learning experiences to ensure students have a sense of purpose				
A.1.3	maintains a classroom environment which has clear expectations for standards of behaviour				
A.1.4	manages resources well to support student learning				
A.1.5	encourages students to assume responsibility for their behaviour				
A.1.6	uses praise to foster students' self-esteem				
A.1.7	facilitates student ownership of classroom procedures				
A.1.8	applies positive management techniques to respond to inappropriate behaviour				
Total					
A.2: Assessment competence					
A.2.1	relates assessment tasks to planned learning outcomes				
A.2.2	uses purposeful assessment tasks which are integrated across sequences of learning experiences.				
A.2.3	Design assessment tasks that include all students and allow students to demonstrate achievements in various ways.				
A.2.4	includes the use of ICT-enriched assessment tasks				
A.2.5	provides students with constructive feedback on performance within an appropriate time frame.				
A.2.6	encourages student self/peer reflection where appropriate				
A.2.7	conducts assessment activities following systemic, national and school policies.				
A.2.8	records student learning outcomes accurately and consistently				
Total					

A.3	Technological competence				
A.3.1	encourages students to use appropriate ICT tools to enhance critical thinking				
A.3.2	encourages students to use appropriate traditional instructional resources, e.g., charts and audio-video aids, to enhance critical thinking				
A.3.3	utilises the whole school as an environment to enhance student learning				
A.3.4	manages access to ICT resources that are inclusive of all students.				
A.3.5	manages access to physical resources that are inclusive of all students and facilitates the achievement of outcomes.				
A.3.6	implements learning experiences that use ICT to support the attainment of planned learning outcomes				
A.3.7	provides opportunities for students to use ICT for a variety of purposes				
A.3.8	Adjusts the use of ICT to include students' learning needs.				
Total					

Part B: Post-observation interview on professional learning activities outside the classroom

1. Comment on the kind of professional dialogue you have with colleagues, if any.
2. In what ways do you act as a 'critical friend' to colleagues to enhance teacher professional effectiveness? If yes. (Probe: How do they assist colleagues in prioritising professional development needs and locating resources for classroom use?
3. Comment on how you orient new teachers to the school context.
4. In what ways do you obtain feedback from various sources to prompt reflection and action? What are the sources?
5. How do you establish goals for your professional development?
6. How do you use classroom observation as a source for ongoing development?
7. How do you collaborate with other professionals to generate new ideas?

Thank you for your time and participation!!

Appendix 4: Questionnaire for Teachers

Dear Respondent,

I am a PhD student at Kyambogo University, Kampala, and currently carrying out research as part of my final year thesis project. This research is a requirement of a PhD programme. My study is on **Instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda**.

I am kindly requesting you to respond voluntarily and honestly to the following questions on the topic. I pledge confidentiality and anonymity. Your information will not be used to harm you, but for study purposes only.

I am grateful for your acceptance of my participation in this study.

Yours sincerely

Polycarp Omara

Section A: Demographic Information of the Teacher

The following structured questions concern the teacher's demographic information. Kindly put a tick (✓) against the appropriate answer in the blank spaces provided.

1. Gender

(a) Male () (b) Female ()

2. Teacher's age bracket

25 -29 years () 30 -35 years () 40 – 49 years () 50 years and above ()

3. Professional Qualifications

(a) Diploma in Education () (b) Degree in Education () (c) PGDE () (d) M. Ed. () PhD in Education ()

4. Years of teaching experience as a teacher

a) Less than two years () b) 2 – 5 years () c) 6 -10 years () d) 11 – 15 years ()
e) 16 – 20 years () f) above 21 years

5. District

Greater Arua city () Greater Arua ()

Section B: Application of Developmental Supervision

Likert

The purpose of this section of the questionnaire is to find out how supervisors portray different behaviours during supervision conferences. Please put a tick (✓) against the number that corresponds with your agreement or disagreement with the statement in the table that follows.

The scales are: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD)

No	Statements	SD 1	D 2	A 3	S A 4
B.1 Directive behaviour					
B.1.1	My supervisor ensures that I follow suggestions to improve teaching.				
B.1.2	During the discussion, my supervisor makes the final decision on what needs to be improved.				
B.1.3	My supervisor finds solutions for me solve the instructional problem.				
B.1.4	My supervisor tells me what to do to improve their teaching.				
B.1.5	This approach is used to supervise new teachers and those seeking help for improvement.				
B.2 Collaborative Behaviour					
B.2.1	My supervisor listens to and accepts my suggestions for improvement.				
B.2.2	My supervisor accepts my disagreements while we are discussing things.				
B.2.3	My supervisor shares responsibility for decision-making with me in selecting the best teaching practices.				
B.2.4	My supervisor works as a colleague with me to overcome issues in classroom teaching.				
B.2.5	This approach is applied to teachers who suggest solutions to improve their classroom teaching				
B.3. Nondirective					

B.3.1	My supervisor allows me to find the best practice to solve the problem in classroom teaching.				
B.3.2	My supervisor lets me explore and generate a variety of alternatives and choose the most appropriate plan for them.				
B.3.3	My supervisor encourages me to be creative and innovative in their classroom teaching.				
B.3.4	My supervisor supports my suggestions to improve classroom teaching.				
B.3.5	This approach is applied to teachers who can solve problems independently.				

Section C: Level of Teacher Competence

Likert

The purpose of this section of the questionnaire is to find out what teachers perceive as the status of their competence. Please put a tick (✓) against the number that corresponds with your agreement or disagreement with the statement in the table that follows. The scales are: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD).

CODE	Statements	SD 1	D 2	A 3	S A 4
C.1	Leadership Competence				
	I can;				
C.1.1	Communicate explicit expectations for student learning.				
C.1.2	structure learning experiences to ensure students have a sense of purpose				
C.1.3	Maintain a conducive classroom environment, which has clear expectations for standards of behaviour				
C.1.4	Manage well teaching-learning resources to support student				

	learning				
C.1.5	encourage students to assume responsibility for their behaviour				
C.1.6	Use praise to foster students' self-esteem				
C.1.7	Facilitate student ownership of classroom procedures.				
C.1.8	Apply positive management techniques to respond to inappropriate behaviour.				
C.2 Professional Learning competence					
I can;					
C.2.1	Regularly reflect on a wide range of actions for ongoing professional growth.				
C.2.2	Obtain feedback from a variety of sources to prompt reflection and action.				
C.2.3	establish goals for my own professional development				
C.2.4	Engage in dialogue with colleagues about professional issues.				
C.2.5	Use classroom observation data as a source for ongoing development.				
C.2.6	collaborate with other professionals to generate new ideas.				
C.2.7	participate in recommended activities for professional learning and development.				
C.2.8	apply a variety of research-verified approaches to improve teaching and learning				
3. Assessment competence					
I can;					
C.3.1	Relate assessment tasks to planned learning outcomes.				
C.3.2	Use purposeful assessment tasks that are integrated across				

	sequences of learning experiences.				
C.3.3	Design assessment tasks that include all students and allow students to demonstrate achievements in a variety of ways.				
C.3.4	include the use of ICT-enriched assessment tasks				
C.3.5	Provide students with constructive feedback on performance within an appropriate time frame.				
C.3.6	Encourage student peer reflection where appropriate				
C.3.7	Conduct assessment activities in accordance with the recommended policies.				
C.3.8	record student learning outcomes accurately and consistently				
4. Technological competence					
I can;					
C.4.1	Encourage students to use appropriate ICT tools to enhance critical thinking				
C.4.2	Encourage students to use appropriate traditional instructional resources such as charts and audio-video aids to enhance critical thinking.				
C.4.3	Utilise the whole school as an environment to enhance student learning.				
C.4.4	Manage access to ICT resources that are inclusive of all students.				
C.4.5	Manage access to physical resources that are inclusive of all students and facilitate the achievement of outcomes.				

C.4.6	Implement learning experiences that use ICT to support the attainment of planned learning outcomes				
C.4.7	provide opportunities for students to use ICT for a variety of purposes				
C.4.8	Adjust the use of ICT to include students' learning needs.				

Section D: Relationship between Instructional Supervision and Teacher Competence

Section D.1: Directive Supervision and Teacher Competence

Likert

The purpose of this questionnaire is to find out what teachers perceive as the relationship between direct assistance and teacher competence. Please put a tick (✓) against the number that corresponds with your agreement or disagreement with the statement in the table that follows. The scales are: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD)

CODE	Item	SD 1	D 2	A 3	S A 4
D.1.1	I follow my supervisor's directives to improve teaching.				
D.1.2	During the discussion, my supervisor makes the final decision on what needs to be improved.				
D.1.3	My supervisor finds solutions for me solve the instructional problem.				
D.1.4	My supervisor tells me what to do to improve their teaching.				
D.1.5	This approach is used to supervise new teachers and those seeking help for improvement.				

Section D.2.: Collaborative Supervision and Teacher Competence

Likert

The purpose of this questionnaire is to find out what teachers perceive as the relationship between collaborative supervision and teacher competence. Please put a tick (✓) against the number that corresponds with your agreement or disagreement with the statement in the table that follows. The scales are: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD)

COD E	Statements My competence improves when;	SD 1	D 2	A 3	S A 4
D.2.1	My supervisor listens to and accepts my suggestions for improvement.				
D.2.2	My supervisor accepts my disagreement while discussing strategies to improve instruction.				
D.2.3	My supervisor shares responsibility for decision-making with me in selecting the best teaching practices.				
D.2.4	My supervisor works as a colleague with me to overcome issues in classroom teaching.				
D.2.5	Competence improves when this approach is applied to teachers who suggest solutions to improve their classroom teaching.				

Section D.3: Non-Directive Supervision and Teacher Competence

Likert

The purpose of this questionnaire is to find out what supervisors perceive as the relationship between non-directive supervision and teacher competence. Please put a tick (✓) against the number that corresponds with your agreement or disagreement with the statement in the table that follows. The scales are: 4= strongly agree (SA), 3= agree (A), 2 = disagree (D), and 1= strongly disagree (SD)

CODE	Item My competence improves when;	SD 1	D 2	A 3	S A 4
D.3.1	My supervisor allows me to find the best practice to solve the problem in classroom teaching.				
D.3.2	My supervisor lets me explore and generate a variety of alternatives and choose the most appropriate plan for them.				
D.3.3	My supervisor encourages me to be creative and innovative in their classroom teaching.				
D.3.4	My supervisor supports my suggestions to improve classroom teaching.				
D.3.5	This approach is applied to teachers who can solve problems independently.				

Thank you for your time and participation.

Appendix 5: Teachers' Informed Consent Form for Survey

Title of the study: Instructional Supervision and Teacher Competence in Secondary Schools in Greater Arua, Uganda.

Investigator(s): Polycarp Omara (PI)

Institution(s): Kyambogo University, Uganda.

Introduction

I am a PhD student at Kyambogo University, Uganda, conducting a study to examine the influence of instructional supervision on the enhancement of teacher competence in secondary schools in Greater Arua, Uganda. You have been identified to participate in this study. If you agree, you were talked to. All the things we shall do together with you have been written down and reviewed by the Gulu University Research Ethics Committee.

A brief description of the sponsors of the research project

This is a self-sponsored study. I am interested in collecting data on the influence of instructional supervision on the enhancement of teacher competence in secondary schools in Greater Arua, Uganda.

Purpose

The study sought to examine the influence of instructional supervision on the enhancement of teacher competence in secondary schools in Greater Arua, Uganda. The findings will inform policy on the development of Uganda's secondary school teacher competence profile. Second, the study findings will alert education stakeholders such as the Ministry of Education and Sports officials, District Education officers and head teachers to enforce training, seminars, workshops and refresher courses on school-based supervision.

Procedures

Your participation in this study is free and will involve participation in filling out a questionnaire. For that reason, I ask your permission to participate. If you decide to participate in the study, you will be asked to sign a consent form, which you will be given a copy to keep.

Who will participate in the study?

Teachers from selected secondary schools in Greater Arua, Uganda, were sampled to participate in the study. You are one of those sampled to participate by filling out a questionnaire. Your role is to permit participation in the survey. Filling out the questionnaire will last for approximately 20 minutes.

Risks/discomforts

There is not much foreseeable risk of harm or discomfort that will arise from your participation in this study. The only risk or discomfort was the inconvenience in terms of time spent during the interview. Secondly, there may be a risk of contracting COVID-19. This can be prevented by observing the MOH standard operating procedures of social distancing, wearing a face mask and regular washing of hands with water and soap.

Benefits

Data on instructional supervision and teacher competence will alert education stakeholders to enforce training, seminars, workshops and refresher courses on school-based supervision. It will give the opportunity to voice concerns on the level of teacher competence and the status of instructional supervision. You will receive feedback on the findings and progress of the study. Any

new information that affected you during the study (including incidental findings) was made available to you.

Confidentiality

Information gathered from you will be kept confidential and for this study only. No name or any form of identification was included. To protect your identity and school information, we shall only use codes to identify participants. Information obtained will only be accessible to the research team. Soft copies of the data were protected by a password, and hard copy files were kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives

You do not have to participate in this study if you are not interested. You will not lose any benefit if you do not participate.

Cost

There will not be any additional cost incurred, but respondents were compensated with UGX 5,000= as a result of participating in this study.

Questions

If you have any questions related to the study or your rights as a participant in this research, you can contact the Principal Investigator, **Polycarp Omara**, by telephone at 0771088077/0782732152 (call and SMS) or via email at polyomara@gmail.com

Statement of voluntariness

Participation in the research study is voluntary, and you may join at your own free will. You have a right to withdraw from the study at any time without penalty.

If you have any issues about your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, **Dr. Gerald Obai**, Tel: No., 0772305621; email: lekobai@yahoo.com/lekobai@gmail.com or the Uganda National Council for Science and Technology, on plot 6 Kimera Road, Ntinda, Kampala, on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study. I understand that my decision to participate in this study will not affect me or my family in any way. In the use of this information, my identity and the identity of my family were concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form was provided to me.

Name.....Signature of participant..... Date

Name.....Signature of interviewer.....Date.....

Appendix 6: Teachers' Informed Consent Form for Lesson Observation

Title of the study: Instructional Supervision and Teacher Competence in Secondary Schools in Greater Arua, Uganda.

Investigator(s): Polycarp Omara (PI)

Institution(s): Kyambogo University, Uganda.

Introduction

I am a PhD student at Kyambogo University, Uganda, conducting a study to examine the influence of instructional supervision on the enhancement of teacher competence in secondary schools in Greater Arua, Uganda. You have been identified to participate in this study. If you agree, you were talked to. All the things we shall do together with you have been written down and reviewed by the Gulu University Research Ethics Committee.

A brief description of the sponsors of the research project

This is a self-sponsored study. I am interested in collecting data on the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

Purpose

The study sought to examine the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. The findings will inform policy on the development of Uganda's secondary school teacher competence profile. Second, the study findings will alert education stakeholders such as the Ministry of Education and Sports officials, District Education officers and head teachers to enforce training, seminars, workshops and refresher courses on school-based supervision.

Procedures

Your participation in this study is free and will involve participation in conducting an observed lesson. For that reason, I ask your permission to participate. If you decide to participate in the study, you will be asked to sign a consent form, which you were given a copy of to keep.

Who will participate in the study?

Teachers from selected secondary schools in Greater Arua, Uganda, will be sampled to participate in the study. You are one of those sampled to participate in conducting an observed lesson. Your role is to permit participation in conducting an observed lesson. An observed lesson will last for 40 minutes.

Risks/discomforts

There is not much foreseeable risk of harm or discomfort that will arise from your participation in this study. The only risk or discomfort was the inconvenience in terms of time spent during the study. Secondly, there may be a risk of contracting COVID-19. This can be prevented by observing the MOH standard operating procedures of social distancing, wearing a face mask and regular washing of hands with water and soap.

Benefits

Data on instructional supervision and teacher competence will alert education stakeholders to enforce training, seminars, workshops and refresher courses on school-based supervision. It will give the opportunity to voice concerns on the level of teacher competence and the status of instructional supervision. You will receive feedback on the findings and progress of the study. Any

new information that affected you during the study (including incidental findings) was made available to you.

Confidentiality

Information gathered from you was kept confidential and for this study only. No name or any form of identification was included. To protect your identity and school information, we shall only use codes to identify participants. Information obtained will only be accessible to the research team. Soft copies of the data were protected by a password, and hard copy files were kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives

You do not have to participate in this study if you are not interested. You will not lose any benefit if you do not participate.

Cost

There will not be any additional cost incurred, but respondents were compensated with UGX 5,000= as a result of participating in this study.

Questions

If you have any questions related to the study or your rights as a participant in this research, you can contact the Principal Investigator, **Polycarp Omara**, by telephone at 0771088077/0782732152 (call and SMS) or via email at polyomara@gmail.com

Statement of voluntariness

Participation in the research study is voluntary, and you may join at your own free will. You have a right to withdraw from the study at any time without penalty.

If you have any issues about your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, **Dr. Gerald Obai**, Tel: No., 0772305621; email: lekobai@yahoo.com/lekobai@gmail.com or the Uganda National Council for Science and Technology, on plot 6 Kimera Road, Ntinda, Kampala, on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study. I understand that my decision to participate in this study will not affect me or my family in any way. In the use of this information, my identity and the identity of my family were concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form was provided to me.

Name.....Signature of participant..... Date

Name.....Signature of interviewer.....Date.....

Appendix 7: Informed Consent Form for Interviews

Title of the study: Instructional Supervision and Teacher Competence in Secondary Schools in Greater Arua, Uganda.

Investigator(s): Polycarp Omara (PI)

Institution(s): Kyambogo University, Uganda.

Introduction

I am a PhD student at Kyambogo University, Uganda, conducting a study to examine the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. You have been identified to participate in this study. If you agree, you will be talked to. All the things we shall do together with you have been written down and reviewed by the Gulu University Research Ethics Committee.

A brief description of the sponsors of the research project

This is a self-sponsored study. I am interested in collecting data on the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

Purpose

The study sought to examine the relationship between instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda. The findings will inform policy on the development of Uganda's secondary school teacher competence profile. Second, the study findings will alert education stakeholders such as the Ministry of Education and Sports officials, District Education officers and head teachers to enforce training, seminars, workshops and refresher courses on school-based supervision.

Procedures

Your participation in this study is free and will involve an interview. For that reason, I ask your permission to participate. If you decide to participate in the study, you will be asked to sign a consent form, which you were given a copy of to keep.

Who will participate in the study?

Headteachers and deputy in-charge academics in selected secondary schools in Greater Arua, Uganda, will be selected to participate in the study. You are one of those identified to participate in an interview. Your role is to give permission to participate in the interview. The individual interview will last for approximately 45 minutes.

Risks/discomforts

There is not much foreseeable risk of harm or discomfort that will arise from your participation in this study. The only risk or discomfort was the inconvenience in terms of time spent during the interview. Secondly, there may be a risk of contracting COVID-19. This can be prevented by observing the MOH standard operating procedures of social distancing, wearing a face mask and regular washing of hands with water and soap.

Benefits

Data on instructional supervision and teacher competence will alert education stakeholders to enforce training, seminars, workshops and refresher courses on school-based supervision. It will give the opportunity to voice concerns on the level of teacher competence and the status of instructional supervision. You will receive feedback on the findings and progress of the study. Any

new information that affected you during the study (including incidental findings) was made available to you.

Confidentiality

Information gathered from you was kept confidential and for this study only. No name or any form of identification was included. To protect your identity and school information, we shall only use codes to identify participants. Information obtained will only be accessible to the research team. Soft copies of the data were protected by a password, and hard copy files were kept under lock and key. Confidential information will only be accessed by the principal investigator.

Alternatives

You do not have to participate in this study if you are not interested. You will not lose any benefit if you do not participate.

Cost

There will not be any additional cost incurred, but respondents were compensated with UGX 5,000= as a result of participating in this study.

Questions

If you have any questions related to the study or your rights as a participant in this research, you can contact the Principal Investigator, **Polycarp Omara**, by telephone at 0771088077/0782732152 (call and SMS) or via email at polyomara@gmail.com

Statement of voluntariness

Participation in the research study is voluntary, and you may join at your own free will. You have the right to withdraw from the study at any time without penalty.

If you have any issues about your rights and participation in the study, please contact the Chairperson, Gulu University Research Ethics Committee, **Dr. Gerald Obai**, Tel: No., 0772305621; email: lekobai@yahoo.com/lekobai@gmail.com or the Uganda National Council for Science and Technology, on plot 6 Kimera Road, Ntinda, Kampala, on Tel 0414705500.

Statement of consent

..... has described to me what is going to be done, the risks, the benefits involved and my rights as a participant in this study. I understand that my decision to participate in this study will not affect me or my family in any way. In the use of this information, my identity and the identity of my family were concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form was provided to me.

Name.....Signature of participant..... Date

Name..... Signature of interviewer.....Date.....

Appendix 8: Measures for The Prevention and Control of The Risk of Spread of Covid-19 During the Implementation of Research

Study Title: Instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda.

Principal Investigator (s): Polycarp Omara

Introduction:

The novel Coronavirus is transmitted from human to human through droplets and direct or close personal contact with an infected individual. Novel Coronavirus signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

Implementation of the prevention and control measures

In the implementation of the research activities, the investigators are committed to ensuring the safety of the research team, research participants and communities where the study was conducted. The study team undertakes to comply with the Standard Operating Procedures issued by the Ministry of Health and presidential directives to mitigate against the risk of infection of COVID-19, rapidly detect and effectively respond to any COVID-19 case that may occur in the process of carrying out the study, screening, face covering, physical distancing, and good hand hygiene.

Procedures to be followed during the implementation of the research.

Before data collection and Training

1. **Health guidance:** There will be training sessions dedicated to COVID-19 sensitisation and awareness to equip the research team with knowledge of signs and symptoms of COVID-19 and preventive measures such as hand hygiene before placing and removing the mask, as well as storage of the mask, and social distancing. The research team will circulate notices, posters, and charts on common signs and symptoms of COVID-19 as provided by the Ministry of Health and develop and use existing plans for the appropriate referral pathway for identified and/or suspected cases.
2. **Personal Screening:** All researchers, research assistants, research participants, and any other individuals engaged in research activities will screen their temperature daily for fever. Screening for temperature was carried out during planning meetings, training, and community outreach. Any individual found with COVID-19 symptoms was withdrawn and referred to the COVID-19 task force for further assessment and management. The withdrawn individual will be allowed to return only if they presented a valid certification of their COVID-19 status showing a negative result.
3. **Wearing face coverings:** All researchers and research assistants, and any other individuals engaged in research activities that require interaction with fellow researchers or research participants, or community members, will have to wear a face mask that thoroughly

covers the mouth and nose at all times. The study will provide face masks for individuals who do not have them.

4. **Physical Distancing:** There was social distancing during the training, meetings, and community outreach of a minimum of 2 metres. During breaks, the team will not be allowed to congregate in common areas.
5. **Good hygiene:** All team members will be required to wash their hands or use hand sanitisers before and after entering the training room and other common areas. Hand-washing equipment shall be supplied and made available at all times. All surfaces and equipment shall be sanitised frequently.

During data collection

1. **Personal Protective Equipment (PPE):** All research assistants involved in tracing respondents and in in-person interviews and research participants will use PPE, including a properly fitted face mask. Enumerators/Researchers and research participants will wash their hands with soap and water or use hand sanitiser before the interview. Handshakes and hugs are prohibited. Physical distancing of at least 2 metres in all research-related activities shall be observed.
2. **Survey/Interviews/Lesson observations:** The research team shall carry educational materials on the prevention of COVID-19 in a language understood by the participants. These materials shall also have visual images to support understanding. Enumerators/Researchers and research participants will wash their hands with soap and water or use hand sanitiser before the interview.

Screening for temperature was carried out before conducting meetings.

3. **Consent Process:** The Researcher /Research assistants will observe social distancing when taking consent (while 2 metres apart) upon arrival to the participant. Enumerators/Researchers and research participants will wash their hands with soap and water or use hand sanitiser before the interview. Participants will then be sensitised on COVID-19 and presented with preventive measures.
4. **Equipment sanitisation:** shared devices used to record or capture data shall be sanitised regularly.

During Dissemination/Community engagement

1. **Community Engagement:** The research team shall carry educational materials on the prevention of COVID-19 in a language understood by the participants. These materials shall also have visual images to support understanding. Enumerators/Researchers and research participants will wash their hands with soap and water or use hand sanitiser before the interview. Screening for temperature was carried out before conducting community engagements.
5. **Equipment sanitisation:** shared devices used during community engagements shall be sanitised regularly.

The preventive and control measures will continuously be reviewed based on new information and guidelines communicated by the Ministry of Health.

Appendix 9: Kyambogo University Introductory Letter



P. O. BOX 1, KYAMBOGO – KAMPALA, UGANDA
TEL: +256-0414-285037/285001, [www. Kyambogo.ac.ug](http://www.Kyambogo.ac.ug)

SCHOOL OF EDUCATION

Department of Educational Planning and Management

29th September 2022

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: OMARA POLYCARP- 17/U/GDED/14380/PE

This is to certify that Omara Polycarp- 17/U/GDED/14380/PE is a PhD in Education candidate in the Department of Educational Planning and Management, School of Education, Kyambogo University. He is carrying out research as one of the requirements of the course. He requires data and any other information on the topic titled:

“Instructional supervision and teacher competence in secondary schools in Greater Arua, Uganda”

Any assistance accorded to him is highly welcome. He is strictly under instructions to use the data and any other information gathered for research purposes only.

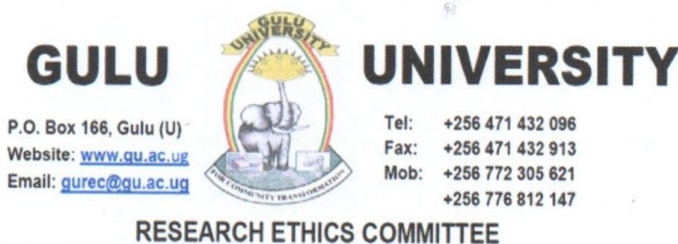
Thank you.

Assoc. Professor George Wilson Kasule

HEAD, DEPARTMENT OF EDUCATIONAL PLANNING & MANAGEMENT

Appendix 10: : Gulu University Research Ethics Committee Approval

Certificate



02/12/2022

To: Polycarp Omara

Muni University
+256782732152

Type: Initial Review

**Re: GUREC-2022-405: INSTRUCTIONAL SUPERVISION AND TEACHER COMPETENCE
ENHANCEMENT IN SECONDARY SCHOOLS IN ARUA, UGANDA, 2.0, 2022-11-20**

I am pleased to inform you that at the **93rd** convened meeting on **20/10/2022**, the Gulu University REC, committee meeting, etc voted to approve the above referenced application.

Approval of the research is for the period of **02/12/2022** to **02/12/2023**.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **02/12/2023** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by Gulu University REC:

Appendix 11: Uganda National Council for Science and Technology

Research Approval Certificate



Uganda National Council for Science and Technology
(Established by Act of Parliament of the Republic of Uganda)

Our Ref: SS1598ES

13 February 2023

Polycarp Omara
Muni University
Arua

Re: Research Approval: **INSTRUCTIONAL SUPERVISION AND TEACHER COMPETENCE ENHANCEMENT
IN SECONDARY SCHOOLS IN ARUA, UGANDA**

I am pleased to inform you that on **13/02/2023**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of **13/02/2023** to **13/02/2024**.

Your research registration number with the UNCST is **SS1598ES**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project. As the Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. Keeping all co-investigators informed of the status of the research.
2. Submitting all changes, amendments, and addenda to the research protocol or the consent form (where applicable) to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority and a notification to the UNCST.
4. Unanticipated problems involving risks to research participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST notification after review by the REC.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. An annual progress report and approval letter of continuation from the REC must be submitted electronically to UNCST. Failure to do so may result in termination of the research project.

Please note that this approval includes all study related tools submitted as part of the application as shown below:

No.	Document Title	Language	Version Number	Version Date
1	Data collection tools	ENGLISH	2.0	20 November 2022
2	Measures to control spread of COVID-19	ENGLISH	2.0	16 November 2022
3	Informed Consent forms for survey	ENGLISH	2.0	
4	Informed consent for Interviews	English	1.0	15 December 2022
5	Informed consent for lesson observation	English	1.0	15 December 2022
6	Project Proposal	English	2.0	
7	Approval Letter	English		
8	Administrative Clearance	English		
8	Data collection tool Interviews	English	3.0	09 February 2023
9	Data collection tool survey	English	3.0	09 February 2023
10	Data collection tool Lesson observation	English	3.0	09 February 2023

Yours sincerely,



Hellen Opolot

For: Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

LOCATION/CORRESPONDENCE

Plot 6 Kimera Road, Ntinda
P.O. Box 6884
KAMPALA, UGANDA

COMMUNICATION

TEL: (256) 414 705500
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug
WEBSITE: <http://www.uncst.go.ug>

Appendix 12: Similarity Index



Page 2 of 328 - Integrity Overview

Submission ID trrcold::1-3375185660

18% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

Filtered from the Report

- Bibliography
- Quoted Text

Exclusions

- 108 Excluded Matches

Match Groups

-  **802** Not Cited or Quoted 15%
Matches with neither in-text citation nor quotation marks
-  **155** Missing Quotations 2%
Matches that are still very similar to source material
-  **0** Missing Citation 0%
Matches that have quotation marks, but no in-text citation
-  **0** Cited and Quoted 0%
Matches with in-text citation present, but no quotation marks

Top Sources

- 15%  Internet sources
- 12%  Publications
- 6%  Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.