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**EFFECTIVENESS OF SUPPORT SUPERVISION AND STUDENTS' ACHIEVEMENT
IN SCIENCE SUBJECTS IN SELECTED GOVERNMENT-AIDED
SECONDARY SCHOOLS**

CASE STUDY: KWEEN DISTRICT

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Making a Difference

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DEDICATION

I dedicate this research work to my beloved husband for his Love and Support towards the completion of my studies, *abundant blessings!*

TABLE OF CONTENTS

DECLARATION	i
APPROVAL	ii
TABLE OF CONTENTS.....	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS.....	x
ABSTRACT.....	xi
CHAPTER ONE.....	1
GENERAL INTRODUCTION.....	1
1.0 Introduction.....	1
1.1 Background to the Study.....	1
1.1.1 Historical Perspective.....	1
1.1.2 Conceptual Perspective.....	4
1.1.3 Theoretical Perspective.....	6
1.1.4 Contextual Perspective.....	6
1.2 Statement of the Problem.....	7
1.3 Objective of the Study	8
1.3.1. General Objective	8
1.3.2 Specific Objectives	8
1.4 Research Questions.....	9
1.5 Scope of the Study	9
1.5.1. Geographical scope.....	9
1.5.2. Content Scope	9
1.5.3. Time Scope	9
1.6 Significance of the Study	10

1.7 Justification of the Study	10
1.8 Conceptual Framework.....	11
1.9 Definition of the Key Terms	12
CHAPTER TWO	13
LITERATURE REVIEW	13
2.0 Introduction.....	13
2.1 Theoretical Framework.....	13
2.2 Forms and Status of support supervision on Students’ Academic Achievement in Science Subjects	14
2.3 Challenges facing the Implementation of Support Supervision and Students’ Achievement in Science Subjects	19
2.4 Strategies for Strengthening the Implementation of Support Supervision on the Students’ Achievement in Science Subject.....	22
2.5 Conclusion of Literature	25
CHAPTER THREE	26
RESEARCH METHODOLOGY.....	26
3.0 Introduction.....	26
3.1 Research Design.....	26
3.2 Area of the Study	26
3.3 Study Population.....	26
3.4 Sample Size and Sampling Techniques	27
3.4.1 Sample Size.....	27
3.4.2 Sampling Procedure and Techniques.....	27
3.5 Data Collection Methods/Data Collection Instruments	28
3.5.1 Data Collection Methods	28
3.5.1.1 Interview	28
3.5.1.2 Questionnaires.....	28
3.5.1.3 Focus Group Discussion	28

3.5.2 Data Collection Instruments	29
3.5.2.1 Interview Guide	29
3.5.2.2 Questionnaire Forms	29
3.5.2.3 Focus Group Discussion Guide	29
3.6 Quality Control Methods	30
3.6.1 Validity	30
3.6.2 Reliability.....	30
3.7 Data Analysis	30
3.8 Ethical Considerations	30
3.9 Limitations and Delimitations of the Study	31
CHAPTER FOUR.....	32
PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS	32
4.0 Introduction.....	32
4.1 Response Rate.....	32
4.2 Demographic Data of Respondents	33
4.2.1 Gender.....	33
4.2.2 Age Bracket	33
4.2.3 Education Level	34
4.2.4 Experience.....	34
4.3 Descriptive Findings	35
4.3.1 Descriptive Findings on Forms and Status of support supervision.....	35
4.3.2 Descriptive Findings on Challenges Affecting the Implementation of Support Supervision	40
Table 4.8: Descriptive Findings on Challenges Affecting the Implementation of Support Supervision	40
4.3.3 Descriptive Findings on Strategies for Strengthening the Implementation of Support Supervision	45
4.3.3 Descriptive Findings on Students' Academic Achievement	50

CHAPTER FIVE	58
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS	58
5.0 Introduction.....	58
5.1 Summary of Findings.....	58
5.1.1 Forms and Status of Support Supervision and Students’ Achievements in Science Subjects	58
5.1.2 Challenges Affecting the Implementation of Support Supervision on Students’ Achievement	58
5.1.3 Strategies for strengthening the implementation of support supervision on the Students’ Achievement in Science Subjects	59
5.2 Conclusion	59
5.2.1 Forms and Status of Support Supervision and Students’ Achievements in Science Subjects	59
5.2.2 Challenges Affecting the Implementation of Support Supervision on Students’ Achievement	59
5.2.3 Strategies for Strengthening the Implementation of Support Supervision on the Students’ Achievement in Science Subject.....	60
5.3 Recommendations.....	60
5.4 Areas for Further Research	60
REFERENCES	61
APPENDICES	65
APPENDIX 1: QUESTIONNAIRE FOR DIRECTOR OF STUDIES AND SCIENCE TEACHERS’.....	65
APPENDIX II: FOCUSED GROUP DISCUSSIONS FOR STUDENTS	72
APPENDIX III: INTERVIEW GUIDE FOR HEAD TEACHER, DEO AND DIS	73

LIST OF TABLES

Table 3.1: Sample size and Techniques by Category of Respondents	27
Table 4.1: Response Rate.....	32
Table 4.1: Gender of the respondents	33
Table 4.3 : Age Bracket for all Respondents	33
Table 4.4: Education Level	34
Table 4.6: Descriptive Findings on Forms and Status of Support Supervision	35
Table 4.7: Inferential Findings Forms and Status of Support Supervision Model Summary..	39
Table 4.8: Descriptive Findings on Challenges Affecting the Implementation of Support Supervision	40
Table 4.9: Inferential Findings on Challenges of Implementation of Support Supervision Model Summary.....	44
Table 4.10: Descriptive Findings on Strategies for Strengthening the Implementation of Support Supervision.....	45
Table 4.11: Inferential Findings on Strategies for Strengthening the Implementation of Support Supervision.....	50
Table 4.12: Descriptive Findings on Students' Academic Achievement	51
Table 4.13: Multiple Model Findings	55
Table 4.14 Regression Coefficients	56

LIST OF FIGURES

Fig 1.1: Relationship between Teacher Support supervision and Students' Academic Achievement in Science subjects.....	11
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LIST OF ABBREVIATIONS

CIV	:	Content Validity Index
DEO	:	District Education Officer
MoES	:	Ministry of Education and Sports
SDG	:	Sustainable Development Goal
SPSS	:	Statistical Package for Social Sciences

ABSTRACT

The study focused on investigating the effectiveness of support supervision on students' achievement in science subjects in selected government aided secondary schools in Kween District. The specific objectives of this study included; To establish the forms and status of support supervision on students' achievements in science subjects in the selected government aided secondary schools in Kween district. To identify the challenges affecting the implementation of support supervision on students' achievement in science subjects in selected government aided secondary schools in Kween district and to find out strategies for strengthening the implementation of support supervision on the students' achievement in science subject in Kween district. The study employed a descriptive cross section survey design and adopted a mixed approach. The study sample size was 97 respondents where simple random and purposive sampling was used in selecting the participants. A questionnaire and interview guide were used in data collection. The findings from the study revealed that; Various forms and status of support supervision predict students' academic achievement in science subjects in Kween District by 20.9% as indicated by the R Square value. Challenges associated with implementation of support supervision predict students' academic achievement in science subjects in Kween District by 31%. Strategies for strengthening the implementation of support supervision predict students' academic achievement in science subjects in Kween District by 53.5%. The study also indicated that; there was a strong positive and significant relationship between support supervision and students' achievement in science subjects in Kween District as depicted by the study variable of $R=0.756$. The study concludes that support supervision moderately influences students' achievement in science subjects in government aided secondary schools in Kween District. The study recommends that; the school management should put more emphasis towards ensuring that the different forms of support supervision are emphasized. The school management should put more emphasis on ensuring that timely measures are put in place to address the challenges that hinder smooth support supervision. There is need to further ensure that the existing strategies are strengthened so as to attain smooth support supervision.

CHAPTER ONE

GENERAL INTRODUCTION

1.0 Introduction

This chapter presents and provides explanation to the; background to the study, statement of the problem, objectives of the study, research questions, scope of the study, significance of the study, justification of the study, conceptual framework and operational definition of the key terms as used in this study.

1.1 Background to the Study

The low level of students' academic performance in core sciences is becoming a concern for most secondary school education initiators. In Africa, Uganda inclusive, students do not perform well in core science subjects in the lower secondary schools (Odongo, 2022). The root cause has been the weak implementation of support supervision to the classroom teachers who are in direct contact to the learners for the purpose of instilling knowledge, skills, and competences for the learners' understanding and performing better in core science subjects. As a remedy, learning institutions across the globe have adopted the practice of support supervision as essential for strengthening teaching and learning commitment for improved students' performance (UNESCO, 2014). Improving teacher performance through support supervision is one of the means of supporting the success of the Institute in achieving its learning goals. Through the support supervision provided, teachers can learn new skills, and the desire to learn must be maintained. Other than that, support supervision can increase the ability and motivation to continually upgrade knowledge so that it makes it easier for teachers to carry out their work and with regards to improving science subjects.

1.1.1 Historical Perspective

The evolution of instructional supervision is evident throughout history as a reflection of learning theory and social and political influences. According to Igwe (2001), to supervise means to guide, assist, direct, oversee, or to make sure that anticipated principles are met. Thus, supervision in a school implies the process of ensuring that principles, rules, regulations and methods prescribed for purposes of implementing and achieving the objectives of education are effectively carried out. Supervision therefore involves the use of

expert knowledge and experiences to oversee evaluate and coordinate the process of improving teaching and learning activities in schools.

Support supervision has its origins in Western Education institutions. Its predecessor was inspection. Inspection began during the colonial period in most African countries as a way of improving the existing missionary schools (Penzer, 2016). By then, education was meant to produce catechists, cooks and clerks for the mission and colonial government. Later, the colonial government appointed Chief Inspector of Schools whose main role was to judge rather than critique and enable teachers improve their teaching skills. The practice emphasized mannerisms, dress code and neatness of teachers.

In Ghana support supervision occur in a face-to-face environment. Educational supervision is one of the few activities which can provide adequate competencies for effective teaching and learning throughout our schools. We all need to know more about the effects of educational supervision in Ghana especially in the Nadowli District (Glickman, Gordon, & Ross-Gordon, 2001; Zepeda, 2003). Supervision of instruction is mandated by Departments of Education and local school districts to assist teachers in providing high quality instruction to public school students. The process of supervising a teacher in an instructional setting often involves direct assistance to improve the strategies of classroom practice through observation and evaluation of teacher performance (Glickman et al., 2001). This procedure is currently practiced in local school districts through checklists and narratives forms that evaluate teachers in a face-to-face setting. Effective supervision is seen as one key to the complex issue of improving the quality and efficiency of basic education, the quality of educational management and the quality of educational attainment.

According to Baffour-Awuah, (2011), in Ghana while head teachers and principals use traditional methods of supervision, teachers showed that they preferred a more contemporary practice of direct assistance often referred to as clinical supervision. Teachers also required consultative, supportive and collegial methods of supervision which are equally more modern. In support, World Bank, (2011) reported that there is a growing conviction that empowerment of school site supervision can make a school respond to needs of learners' and improve overall achievement. Monitoring of teachers is a guarantee for better qualities which is possible with cooperation between principals, deputy principals and teachers. The report indicated that supervision should be extended to classroom situation. The gap in this study was that it was conducted in primary schools as opposed to this study which was conducted

in secondary schools. This relevant to this study because researcher intends to find out the influence of teacher support supervision on student's academic achievement in science subjects.

In Nigeria, Owadiae, (2012) reported that secondary school students' academic performance in external examination greatly declined and as such, support supervision was needed to improve learners' academic achievements in secondary school. In support, Akinfolarin, Babalola, & Aledetin, (2017) affirmed that teacher support supervision was important for learners' academic achievement in examinations, hence, student's academic achievement in examination can be attributed to the level of support supervision of teachers. Therefore, to achieve the desired quality of learning depends on effective support supervision of teachers which in turn improves the academic achievement in schools. This study strived establish influence of support supervision on students' academic achievement in science.

In Uganda, support supervision started in 1925 as a centralized activity done by the Directorate of Education Standards (Jensen, 2013) to ensure quality education in all educational institutions. However, in 2008, support supervision was decentralized at district level to further enhance the performance of teachers and subsequently that of learners (Musaazi, 2016). The inspectors of schools at the district were empowered to oversee support supervision activities in order to improve educational and teacher performance in terms of effective teaching, syllabi coverage and accomplishment of assigned tasks. The Uganda Government has for the last three decades advocated for the prioritization of science, technology and innovation as the basis for development. To actualize this plan, the Uganda Science Education Policy (2005) made science subjects (physics, chemistry and biology) compulsory for all students up to the fourth year of secondary education. The rationale behind the policy was to build capacity in the field of science in Uganda. Consequently, science subjects were made compulsory in schools, and 75% of the Government scholarships to public universities were considered science-based for new entrants (Musaazi, 2016).

In an effort to promote science subjects and courses in Uganda, the government implemented a number of initiatives which include in-service training of science teachers (SESMAT, 2005), salary enhancement for science teachers, government sponsorship for science courses in tertiary institutions, and 70% loans scheme for science courses. The essence of support supervision is to provide opportunity for teachers to realize their professional development goals and to perform well in schools (Ololube & Major, 2014). Some of the support

supervision services implemented in secondary schools include in-service training of science teachers, class room observations and mentorship by heads of departments/head teachers as well as regular monitoring visits by the ministry of education and sports.

1.1.2 Conceptual Perspective

Supervision can be understood as a process of monitoring a person's ability to achieve organizational goals. Imaniriho (2014) defines the task of supervision, as the task of planning, namely to determine policies and programs, also administrative duties, namely making decisions and coordinating through conferences and consultations carried out in an effort to seek improvements in the quality of teaching. Supervision is all assistance from school leaders, which is aimed at developing the leadership of teachers and other school personnel in achieving educational goals (Mc Beath, 2018). It is in the form of encouragement, guidance, and opportunities for the growth of skills and abilities of teachers, such as guidance in business and implementation of reforms in education and teaching, selection of learning tools and teaching methods that are better, ways of systematic assessment of phases of the entire teaching process, and so on. In other words, supervision is a coaching activity that are planned to assist teachers and other school employees in carrying out their work effectively.

Support supervision refers to the cycle of activities between a supervisor and a teacher targeted at improving classroom performance (Memon, 2017). It must be noted that, the most important supervision and guidance in the school setting is that given by the school head. The key concern of instructional supervision practices by the school head is to improve schools and students' achievements by helping teachers to deliver adequately in their role performance (Atiah, Fitria & Destiniar, 2020). Teacher role performance generally includes activities that teachers professionally perform in the classroom in relation to their areas of specialization, which for this case science teaching.

Under the support supervision approach to performance improvement, head-teachers become aware of their supervisory roles and focuses teachers' effectiveness in producing desired behavioral change in students. It also focuses on whether teachers' creativity can be enhanced by head-teachers, where supervisory roles and skills development are expected to impact positively on the academic student performance, including science subjects. The principal as the school supervisor is required to participate in order to better understand education, to help control the management of education, including teacher competency development in science education (Enaigbe, 2019). To provide quality education requires adequate moral support,

one of which is through supervision by the principal. Supervision is carried out by carrying out evaluation activities to further find a follow-up to the problems faced in ensuring better academic performance and quality education as a whole.

The function of support supervision or supervision in education is not just a control to see whether all activities have been carried out in accordance with the plans or programs that have been outlined, but more than that. Supervision in education contains a broad meaning, with its activities embedded in determining the conditions or requirements of personnel or materials necessary for the creation of an effective teaching and learning situation, and efforts to meet those requirements (Okendu, 2013). According to Wanzare (2017), support supervision is more effective than corrective fault-oriented inspections in improving service delivery since its perceived as a key strategy in enhancing the competences of teachers to perform their duties effectively. I.e. it is a facilitative approach to supervision that promotes mentorship, joint problem-solving, professional development and communication between supervisors and supervisees. It is carried out in a respectful and non-authoritarian way with a focus on using supervision as an opportunity to improve knowledge. In the educational reforms, support supervision has been suggested as one of the best approaches to improve teachers' commitment to teach, which has been found vital in enhancing the pedagogical competences of teachers to perform their duties effectively (Nurabadi *et al*, 2021). In that way, the approach has been hailed for providing opportunities for regular feedback and thereby promoting skill building through appropriate strategies, such as training & mentorships.

Davis & Elilson (2017) reported that support supervision in eastern Uganda was irregular and was less developmentally inclined since it was not done to improve the professional competence of teachers but rather as a duty to satisfy the ministry of education and sports (MoES). The report further indicated that much as teachers registered some improvement in some of their teaching roles as a result of support supervision, the quality was not good enough to significantly affect learners' performance. However, although support supervision is a powerful approach to building professional capacity, studies have shown that the approach and manner in which it is implemented affects the intervention outcome negatively (Ige, 2013).

According to Carasco, Munene, Kasule & Odada (2016) achievement is the result of a process carried out by humans. Student achievement is the result of real work in quality and

quantity achieved in carrying out his/her learning duties in accordance with the responsibilities given. The learning process to run well should be supported by supervised teachers who have high competence and performance because teachers are the spearhead and foremost implementers of children's education in schools, and as curriculum bearers (Darling-Hammond, 2013). Teachers who have often been supervised are able to foster student enthusiasm and motivation to learn better, which in turn would improve the quality of learning in sciences.

1.1.3 Theoretical Perspective

The study was guided by the General Systems Theory which was propounded by Ludwig Von Bertalanffy (1968). He interpreted “systems” to mean complexes of elements standing in interaction. The theory investigates the component of a phenomenon, examines the interaction between the components and the relationship that exists between the components and their larger environment. In reference to the educational system, the General Systems Theory recognizes the interdependencies and interrelationship among the parts of the education system (Heneveld & Craig, 2016). Thus, any changes in one part of the education system are likely to affect other parts of the system. In the school setting, variation in a particular component is likely to result in variations in the interdependence between the other components (students, teachers, school authorities, parents, and many more).

The application of this theory to the study, is that secondary schools in Uganda are independent systems with various components such as educational authorities, school heads, students, staff, parents and the community interacting continuously to achieve objectives. Changes in any of the components are likely to affect the others. Therefore, variations in school heads' supervision of lesson planning supervision, lesson delivery and assessment practices are likely to cause a change in teacher role performance in senior high schools. Similarly, external factors (which for this case the challenges in the implementation of support supervision) by no doubt has influence on the school performance in achieving better academic outcomes in science subjects.

1.1.4 Contextual Perspective

The performance of science subjects especially in Kween district has remained poor ever since the role out of the science education policy in 2006 as reflected by the perennial poor performances at ordinary level as alluded to by the minister of education during the release of 2021 UCE results in August 2021 despite the huge investment in the education sector in

Uganda (MoE&S, 2021). The poor performance in science subjects is attributed to teachers' failure to regularly conduct practical lessons, carry out effective students' assessment, and prepare schemes of work as well as lesson plans. Other causes of poor science performance are teacher absenteeism, inadequate syllabus coverage and preparation of work, poor time management, poor pupil and teacher discipline and inappropriate teaching methods (Tanak, 2020).

Despite the heavy investment in teacher training programs to the teaching staff at secondary level education, students' performance in science subjects have persistently remained low (Scheerens & Ehren, 2015). While there are many factors that affect teacher performance, it is suspected that student training is one of the major ones. The question therefore is: how effective are the training and mentoring programs of the institutions of higher learning in Uganda? Are the teachers properly supervised and mentored for delivering efficient teaching practice? It therefore becomes necessary that the relationship between teachers' instructional supervision and students' academic performance in core science subjects made known to the relevant education developers. The poor academic achievement of learners has left various stakeholders wondering whether teachers undergo instructional supervision for enriching their teaching practices for better academic outcomes.

The executive secretary UNEB during the release of 2021 UCE result revealed that Kween District registered the highest failure rates in 2017, 2018, 2019, 2020 and 2021. The students' achievement in science subject in Kween district remained low especially in science subjects with the district being ranked among the last five districts for the past decade (Daily Monitor February 07, 2018). Furtherance, the 2020 Kween District National UCE examination result demonstrated low performance in core sciences when you consider results obtained in every day homework, tests and internal exams, where 63% of students in lower secondary schools in Kween District are reluctant to commit to core sciences learning (MoES, 2020).

1.2 Statement of the Problem

Support supervision is increasingly being looked at as the best way to improve classroom instruction through mentoring of teachers. Instruction supervision is to support the improvement of teachers based on their knowledge, teaching skills, and their competency in making professional decisions. In an effort to promote science subjects, the government implemented a number of initiatives which included in-service training of science teachers (SESMAT training), salary enhancement for science teachers, government sponsorship for

science courses in tertiary institutions, and 70% loans scheme for science courses. The rationale of support supervision in government aided secondary schools is to help teachers develop and articulate their professional strengths and their unique capabilities in dialoguing, intellectualizing and theorizing their performance on instilling knowledge and skills to learners (MoES, 2020). Despite government efforts to improve teaching of science subjects through support supervision, students' academic achievement in science subjects has steadily reduced over years (Heneveld & Craig, 2016). The performance of science subjects has remained poor ever since the role out of the science education policy in 2006 as reflected by the perennial poor performances at ordinary level as alluded to by the minister of education during the release of 2021 UCE results in August 2021 (MoES, 2021). The poor performance in science subjects is attributed to teachers' failure to regularly conduct practical lessons, carry out effective students' assessment, and prepare schemes of work as well as lesson plans (UNESCO, 2014). It was in line with this that the study sought to establish the influence of support supervision on students' academic achievements in science subjects in selected lower secondary schools in Kween District.

1.3 Objective of the Study

The study was guided by two Objectives as below;

1.3.1. General Objective

The study sought to examine the effectiveness of support supervision on students' performance in science subjects from selected government aided secondary schools in Kween District.

1.3.2 Specific Objectives

- i. To establish the forms and status of support supervision on students' achievements in science subjects in the selected government aided secondary schools in Kween district.
- ii. To identify the challenges affecting the implementation of support supervision on students' achievement in science subjects in selected government aided secondary schools in Kween district.
- iii. . To find out strategies for strengthening the implementation of support supervision on the students' achievement in science subject in Kween district

1.4 Research Questions

- i. What are the forms and status of support supervision on students' achievements in science subjects in the selected government aided secondary schools in Kween district?
- ii. What are the challenges affecting the implementation of support supervision on improved science subject performance from selected government aided secondary schools in Kween district?
- iii. What should be done to strengthen the implementation of support supervision on improved science subject performance in Kween District?

1.5 Scope of the Study

The study considered Geographical, Content and Time scope as below;

1.5.1. Geographical scope

The study was conducted from selected secondary schools within Kween district. The district is found in the MT. Elgon region of eastern Uganda. Kween district is located within the geographical coordinates of 1°22'38.4"N (1.3773200°), 34°34'28.4"E (34.5745600°), and bordered by Kenya to the north, Sironko district to the south, Bukwo district to the east and Kapchorwa district to the west. Secondary school coverage is averagely fair. I.e. at least one school per sub-county.

1.5.2. Content Scope

The study be limited to support supervision and students' academic achievement in science subjects. Specifically, the content was within the study objectives i.e. finding out the effects of support supervision on students' performance, key issues/challenges affecting the implementation of support supervision on improved science subject performance, and strategies for strengthening implementation of support supervision on improved science subject performance in Kween district

1.5.3. Time Scope

The study was limited to the time period between 2021 to 2023 to assess the contribution of support supervision on ensuring students' academic achievement in science subjects in selected secondary schools in Kween district. This is because it is within this period that there has been deterioration in the performance of science subjects in Kween district.

1.6 Significance of the Study

- i.** The findings of this study may assist in improving teachers' support supervision practices. One of the researcher's grand expectations in regard to the importance of the study is that the study might help to inform the key education stakeholders, first those holding administrative and managerial positions such as Minister of Education and Sports (MoE&S), District Education Officers (DEOs), Inspectors of Schools (IOS), educational institutional leaders, Board of governors, to revive their zeal for teacher support supervision in secondary schools.
- ii.** The MoE&S may help to spur to enforce support supervision-based-training, seminars, workshops and refresher courses countrywide for secondary school. Besides, the study might likewise benefit secondary school teachers by keeping them abreast of the need for teacher support supervision to improve their classroom instruction and management as well as help them meet their professional growth and career development needs. The study would also provide the researcher with in-depth insight into teacher support supervision and its associated dimensions.
- iii.** The study may also provide intellectual inputs for future researchers in search for knowledge on teachers' instructional support supervision practices and students' academic achievement in science subjects in other parts of the country and beyond. This would help them extend and develop new knowledge that may help to enhance their productivity basing on their professional experiences.

1.7 Justification of the Study

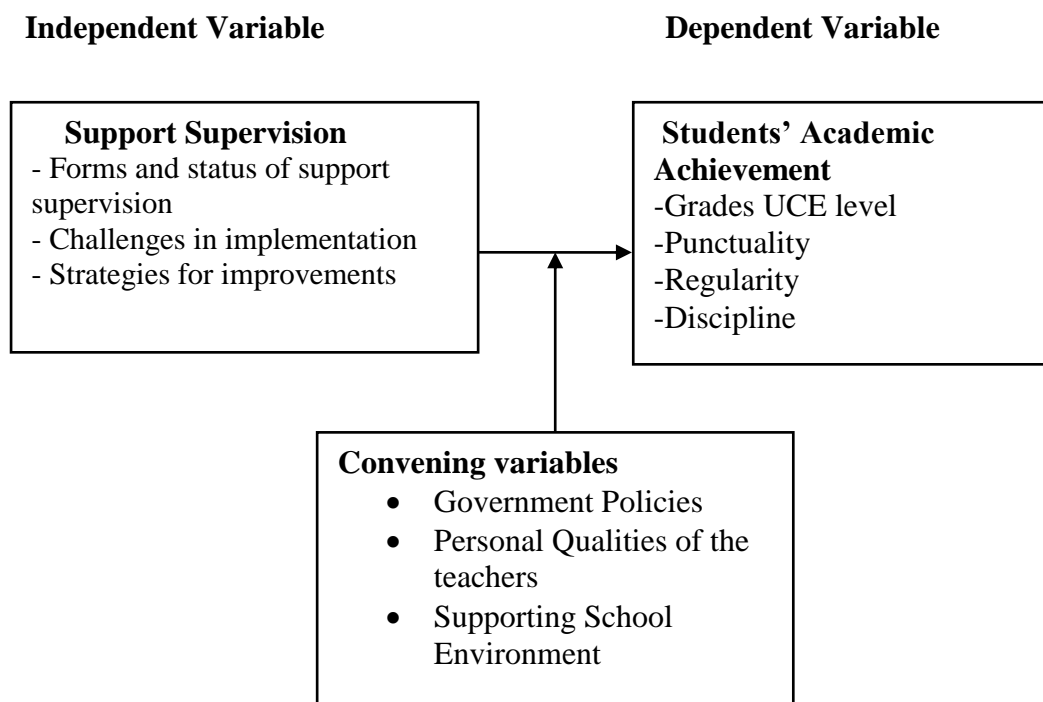
- i.** The study was carried because it would awaken the Ministry of Education and sports to put emphasis on the regular support supervision practices for teachers' preparation in order to maintain the desired quality and the standards of education.
- ii.** The study was also carried out because it would enable teachers to proceed with focused teacher support supervision through conducting classroom observation and checking of assessment records in order to keep abreast with the happenings in the classroom. This practice would enable teachers to be well organized and planned to ensure that support supervision does not inflict fear or demoralize teachers in their classroom instruction.
- iii.** The study was also carried out because it would provide baseline information for the policy makers and education planners to set policies and reinforce teacher support

supervisory practices on classroom control and management by teachers to ensure effective classroom instruction.

1.8 Conceptual Framework

The study aimed at examining the effectiveness of support supervision on students' academic achievements in science subjects in selected secondary schools in Kween District. It was noted that whatever a supervisor does during support supervision practice has a significant bearing not only on teachers' classroom instruction but also on students' academic achievement. This is because supervisor's support supervision skills manifest during observation and when giving the teacher the observation feedback, a session during which both the supervisor and the teacher share their experiences. Therefore, influence of teacher support was expected to impact on students' academic achievements in science subjects. Figure 1.1 depicts all the essential prototypes of support supervision practices and students' academic achievement in selected secondary schools in Kween District and how these variables relate.

Fig 1.1: Relationship between Teacher Support Supervision and Students' Academic Achievement in Science Subjects.



Source: Adopted and Modified from Blumer (1969)

Fig 1.1: above shows the relationships between teachers' support supervision and students' academic achievements in science subjects in selected secondary schools in Kween District. The indicators of the independent variable are Forms and status of support supervision, Challenges in implementation and strategies for improvement support supervision. Students' Academic Achievement in Science subjects include; Grades at UCE, Punctuality, Regularity and Discipline. The dependent variable is the intended result of teacher support supervision. In this study, it was postulated that students' academic achievement in science subjects depends on the effectiveness of head teachers' instructional supervisory practices. However, for the independent variable to have an effect on the dependent variables there should be intervening variables; Government policies school supporting environment and personal qualities of the teacher.

1.9 Definition of the Key Terms

Students' Achievement: -activity outcome (usually measured by the level of efficiency and effectiveness or quality and quantity); It can be poor, good or excellent.

Science Subjects: sometimes referred to as practical subjects; in secondary schools they include, Biology, Chemistry and physics.

School: A school is an educational institution designed to provide learning spaces and learning environments for the teaching of learners under the direction of teachers.

Secondary Schools: Secondary schools are schools of corresponding grade, ranking between primary schools and institutions of higher learning.

Supervision: Supervisory is the giving of detailed information about how something should be done or operated:

Support Supervision: an assistance or guidance accorded by a colleague or a leader to a classroom teacher to enable him/her performs his or her teaching role effectively. It involves classroom observation, group development and teacher professional development activities.

Teacher: A teacher is someone whose job is to teach in an academic institution such as a school or college.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents review of the literature related to support supervision and students' academic achievement in science subjects in accordance to the specific objectives of the study as below;

2.1 Theoretical Framework

The study was anchored on the General Systems Theory propounded by Ludwig Von Bertalanffy (1968). He interpreted "systems" to mean complexes of elements standing in interaction. The theory investigates the component of a phenomenon, examines the interaction between the components and the relationship that exists between the components and their larger environment.

In reference to the educational system, the General Systems Theory recognizes the interdependencies and interrelationship among the parts of the education system (Heneveld & Craig, 2016). Thus, any changes in one part of the education system are likely to affect other parts of the system. In the school setting, variation in a particular component is likely to result in variations in the interdependence between the other components (students, teachers, school authorities, parents, and many more). The theory also supports the view that people seek solutions in which they can attain personal responsibility, finding solutions to their problems in which they can receive rapid feedback on their performance. This enables them to establish challenging goals. Head teachers need to provide feedback to their teachers after the supervision exercise. The teachers are human beings who need sense of belonging. This calls upon the supervisors to provide a conducive environment and resources for quality standards in their schools. This was supported by (Heneveld & Craig, 2016) that employees like to be accepted by others in a friendly and cooperative atmosphere and mutual understanding.

Applying the above specifically to this study, the secondary schools in Uganda in general are independent systems with various components such as educational authorities, school heads, students, staff, parents and the community interacting continuously to achieve objectives. Changes in any of the components are likely to affect the others. This was also applicable to the study in that teachers should be recognized, consulted, mentored in a more professional matter by way of appreciating their strengths and also identifying the areas of improvement

for them to work upon. Therefore, variations in school heads' supervision of lesson planning supervision, lesson delivery and assessment practices are likely to cause a change in teacher role performance in senior high schools. Similarly, external factors (which for this case the challenges in the implementation of support supervision) by no doubt has influence on the school performance in achieving better academic outcomes.

2.2 Forms and Status of support supervision on Students' Academic Achievement in Science Subjects

Direct supervision as a form of instructional supervision encompasses all the measures by the school head to facilitate one-on-one feedback with teachers to enhance instruction and professional capacity (Atiah, Fitria & Destiniar, 2020). The key concern of instructional supervision practices by the school head is to improve schools and students' achievements by helping teachers to deliver adequately in their role performance. Teacher role performance generally includes activities that teachers professionally perform in the classroom in relation to their areas of specialization, which for this case teaching science subject. Although (Atiah, Fitria & Destiniar, 2020) attempted to address supervision concern but his interest was on instructional supervision practices by the school head to improve schools and students' achievement but no mention was made whether or not support supervision contributed to the students' academic achievement in the science subjects in any way possible which this study sought to address in government aided secondary schools in Kween District.

Under the support supervision approach to performance improvement, head-teachers become aware of their supervisory roles and focuses teachers' effectiveness in producing desired behavioral change in students. It also focuses on whether teachers' creativity can be enhanced by head-teachers, where supervisory roles and skills development are expected to impact positively on the students' academic achievement, including science subjects. The head teacher as the school supervisor is required to participate in teachers' support supervision in order to understand education and to help control in the management of education in the school setting, including teacher competency development in science education (Enaigbe, 2019). However, to provide quality education, it requires adequate moral support, one of which is through support supervision by the school administration. Therefore, in this study support supervision was sought to be carried out in form of evaluation of teachers' activities to further find a follow-up to the identified areas of improvement during the supervision so as to ensure improved students' academic achievement in science subjects as well as the quality and standard of education as a whole.

According to Robert, Woods & Ray (2018), support supervision should ensure that teachers do early planning of lessons, effective lesson delivery, and proper use of teaching aids as well as strict follow up of the curriculum. Supervision should also ensure that teachers prepare adequately for their teaching task, deliver their lessons effectively in the classrooms to the full benefit of the learners and cover their syllabus as prescribed. Head teachers and heads of department in secondary schools have the duty to supervise teachers not only in the classrooms but also at the pre-teaching and post teaching stage after the classroom. And when effectively managed, teachers are able to perform better. Often, site-based administrators are responsible for internal support supervision of the teachers while district and ministry officials provide external support to teachers (MoES, 2021). Although the support supervision mechanisms are put in place and well-articulated by the Ministry of education and sports, the question remains are the support supervision practices effectively and efficiently done in Kween district a basis upon which the study was set to established.

The status of the practical implementation support supervision in Uganda, especially with regards to the supervision of the; lesson planning, lesson delivery, teaching assessment and other subsequent school administration and supervision content areas. Archibong, (2014) described school administration and supervision as an attempt to implement an innovation such as institutionalizing supervision of teaching with ultimate goal of producing change in teachers' skills, curriculum delivery and implementation. In secondary schools setting Kween district inclusive teachers' support supervision involves a series of activities to help teachers improve and develop their abilities in carrying out the teaching and learning process upon which learning goals are achieved. Yusnita *et al*, (2018), concluded that teachers' support supervision in schools has an impact on teacher job performance and students' academic achievement which is the end goal in the teaching and learning process. This was applicable and relevant to the study in that the study intended to establish the effectiveness of support supervision based on the forms and status on the students' academic achievements in science subjects in Kween district.

Lesson planning forms is a major component of the teaching-learning process. Considering that the teachers' scheme of work constitutes the fundamental basis for any teacher's professional delivery, it is worrying that less attention is paid to its preparation by school heads in the study locale. As indicated by (Heneveld & Craig, 2016), schemes of work define the structure and content of a course and clearly outline how resources, class activities and assessment strategies will be used to ensure that the learning aims and objectives of a course

are met. Again, the study by Memon, (2017) found a positive relationship between head teachers' inspection of teachers' schemes of work and performance of students in national exams. This was relevant to the study in that if the school administrators exhibit poor performance in their responsibility of teacher support supervision in the school it obviously has negative bearing on teacher's responsibility roles in terms of preparation and actual teaching during classroom instruction.

Lesson plans are not vetted regularly by the school heads (Ololube & Major, 2014). This contradicts the expectations from secondary school heads who are admonished to critically and consistently examine various items of the lesson plan for effective instructional delivery of teachers as well as the implementation of support supervision which authorizes school heads to regularly vet the weekly lesson plans of all teachers in conformity to required standards. On the issue of whether school heads helped their teachers to select appropriate teaching/learning resources for their lessons. Young (2018) reveals that it is hardly done; which can affect teachers' ability to deliver lessons effectively. Yusnita *et al* (2018) once noted that school heads from government aided secondary schools scarcely help teachers to choose appropriate teaching/learning resources for lesson delivery compared to those in the private schools. Their publication relates to the one of (April & Bouchamma, 2015) who posited that there is a significant relationship between the school head's supervisory strategies and teachers' instructional performance in terms of teaching materials.

Indeed, if school heads could help teachers choose appropriate teaching/learning resources, it could positively influence teaching because that would facilitate the learners' understanding of abstract concepts (Robert, Woods, Ray, & Montagno, 2018). This implies that there is the likelihood of students in secondary schools not grasping concepts taught in science subjects in the country which may lead to poor students' performance. In respect to lesson delivery supervision, Wanzare (2017) asserts indicate high commitment of school heads to the checking of teachers' punctuality and effective use of instructional time under the support supervision implementation in Uganda. They reveal that school heads ensured that teachers kept to time for lesson delivery as indicated on the timetable. The commitment of the school heads to the practice of ensuring teachers' punctuality and effective use of instructional time is in tandem with the view of Young (2018) who found the instructional supervision activities of the school head to include seeing to it that teachers engage in meaningful instructional activities and keep to allocated instructional time. This could help to enhance the attainment

of instructional objectives, culminate in timely completion of syllabuses and improve students' performance.

According to Kunter *et al*, (2013), school heads visit and supervise teaching in the classroom, which implies that school heads monitored the instructional delivery of their teachers to offer assistance when necessary. The monitoring of teachers' instructional delivery by school heads ties in with the findings of Ololube & Major (2014) on instructional supervision and the pedagogical practices of secondary school teachers in Uganda which revealed that school heads supervision of lesson delivery through classroom observations has statistically significant effect on the pedagogical practices of teachers in public secondary schools in Uganda.

The findings further agree with Memon (2017) that informal and formal class visitations by principals assist teachers to assess their performance and make conscious efforts to improve performance. However, contrary to the revelation of (April & Bouchamma, 2015) that instructional supervision (through portfolio observation and classroom observations) was inadequately carried out and this allowed teachers to employ ineffective science subject teachings. The fact that school heads occasionally checked the adequacy of subject content delivered to students as found in this study is of great concern. This implies that the school heads spend very little time on ensuring adequacy of subject content delivered by teachers. This finding is also contrary to that of (Memon, 2017) that school heads must ensure teachers actively involve students in lessons and adequately deliver subject content. Lack of knowledge in science subject specialization or enormity of the duties expected of school heads may be blamed for the non-fulfilment of this important responsibility which may negatively affect role performance of teachers' lesson delivery.

The revelation that school heads were not bothered about teachers' active involvement of students in their class is not a good development. This finding is contrary to the findings of (Oghuvbu, 2018) that clinical supervision by school heads have been found to enhance teachers' instructional delivery through formal classroom observation by principals in which the principals collect variety of classroom variables such as teachers' active engagement of their students in their lessons. In relation to the supervision of teaching assessment, Ololube & Major (2014) established a significant impact of school heads' checking of students' notes, class exercises, moderation of examination questions and marking schemes on students' academic performance. Absolutely right, teaching assessment by the teachers could have

positive influence on the teachers' lesson delivery because it would inform teachers of the specific content areas where students need further assistance.

Penzer (2016) notes that school heads' checking of students' notebooks/exercise books has a significant effect on academic achievement of students. The finding is also in tandem with Heneveld & Craig (2016) which established that school heads' monitoring of teachers' effective use of instructional time, checking of pupils' notebooks, giving enough classwork, marking assignments, writing and marking corrections enhances students' academic performance.

Perhaps support supervision could have failed to yield positive result in many districts due to the nature in which is conducted and the purpose for carrying out the exercise. Penzer, (2016) publication reveal that the current supervision practices in learning institutions appears to be focusing more on inspection rather than supervision; the supervision carried out appears to be more looking for teacher errors than for solutions to teaching problems and lack the development of professionalism in a teacher, and yet supervision carried out for professional development has impact on increasing the competence of teachers (especially those handling science subjects).

Supervisors' incapacitations to provide democratic/professional supervision have been proven to affect negatively the education outcome as the inspectors tend to creates gaps between themselves, the school administration, teachers as well as the pupils. Field observations as published by Fullan & Hargeaves (2013) indicates that once the inspectors arrive for inspection roles, some important materials to which the performance of the schools would be evaluated are sometimes hidden from them, false information would be provided and in most cases the situation of panic/fear emerges thus, the teaching staff remains in a mood that does not promote effective teaching for better academic performances; Daily Nation 3rd August Page 4 (2009).

Poor performance continues to be apparent among secondary schools in the country (MoES, 2020). The low level of learning outcomes in secondary schools in public examination in the present days renders education system impotent to achieve its expected outcomes. The poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time (April & Bouchamma, 2015).

UNESCO (2014) revealed that supervision services are delivered by qualified and experienced officers who are academically and professionally sound, but currently there is low level of empowerment provided to school supervisors; and therefore, weakening their professional supervision roles for effective service delivery. Sometimes the available resources and working conditions are not supportive for providing motivated participation in the supervision roles. A poor working conditions and heavy workload result in fewer visits to school especially in rural areas where regrettably those services are needed most. Young (2018) reports that, educational institutions that draw proforma for supervision collaboratively (head teachers and their teachers) create a conducive environment for formative development, monitoring and evaluation. This promotes school-based coaching, mentoring and participatory interaction between the supervisors and supervisees on improved service delivery.

The implementation of support supervision in Uganda appears to be critical in motivating teachers, promoting the use of suitable materials and building teamwork, which has also been recommended in supporting the teaching process, assisting teachers to learn from each other, improving teachers' utilization of available educational resources, and providing real opportunities for continuous evaluation and appropriate feedback (Young, 2018). They are indeed factors for good academic performance, which can be adopted and utilized on the attainment of better academic grades in science subjects in Kween district.

2.3 Challenges facing the Implementation of Support Supervision and Students'

Achievement in Science Subjects

Despite government efforts in providing training facilities for teachers, providing teacher refresher courses and the introduction of standard approved curriculum, secondary schools in Uganda have consistently registered low levels of academic achievement in core science subjects which could be due to problems stemming from administration and learning supervision gaps (Memon, (2017). Obiweluzor, Momoh, & Ogbonnaya (2013), identified shortage of supervisors as the major challenge faced by institutions of learning in the supervision of student teachers in Uganda. They observe that, the number of supervisors to enforce support supervision in schools is inadequate to carry out effective support supervision of teachers in the country. Penzer (2016), also expressed a concern about many unprofessional practices carried out schools today have negatively impacted on students' academic achievement in science subjects in most schools. It is against this background that the study sought to find out whether or not teachers' support supervision influences students'

academic achievement in science subjects in any way in selected government aided secondary schools in Kween district.

Pelletier (2015), asserted that the absence of a specific budget for support supervision was a critical challenge that affects the quality of teachers support supervision. Inadequate budget impedes effective running of support supervisory activities, for teachers and experience sharing in the school. Pelletier, further stressed the importance of adequate instructional materials in enhancing effective and efficient support supervision. Archibong (2014), identified support supervision guides and manuals as some of the materials having big impact on supervisor's work. These tools can enhance the objectivity of supervisory process and inform schools and teachers of the issues the supervisors focus on. This enhances the transparency of the process (Young, 2018). This study therefore, intended establish whether or not selected government aided secondary schools in Kween district experiences budgetary constraints that has consequently hindered students' academic achievement in science subjects.

Most supervisors are not given the necessary induction or orientation about support supervision as an overseeing responsibility in order to equip them with the skills necessary for support supervision but rather they venture into instructional supervision without fully understanding how it is done (Archibong, 2014). Similarly, Isdaryanti *et al* (2022), emphasized the need for supervisors to have knowledge and skills of teacher support supervision in order to provide teachers with the necessary assistance, guidance, and support for improved classroom practices and students' academic achievement. This study aimed at establishing whether the supervisors in selected government aided secondary schools in Kween district encounter some challenges in an attempt to implement support supervision in view of improving already worrying students' academic achievement in science subjects. Heneveld & Craig (2016) noted that, unless teachers perceive supervision as a process of promoting professional growth and student learning, the support supervision exercise will not achieve its desired end in schools.

Kartini, Kristiawan & Fitria, (2020) categorized other challenges supervisors of instruction encounter in Uganda. For example, unprofessional attitude toward and diminished interest in work by teachers, poor perception of the teaching profession by the public, low status of teachers as seen in the public eye, continuous changes in educational policies, political instability and lack of reliable evaluation system in Uganda as the greatest challenges

encountered by school inspectors and supervisors. In this study the researcher therefore, wanted to find out whether aforementioned challenges are also categorical in selected government aided secondary schools in Kween district. Furthermore, they echo that laxity of school administrators is another challenge to support supervision regard to students' academic achievement.

Similarly, Penzer (2016) doubts whether school administrators really know what is expected of them and their limitations in administration of schools. This is inconsistent with Archibong (2014) findings that indicated that supervisors are engaged in routine administrative burden and therefore hardly find time to visit classrooms and observe how the teachers are teaching. Pelletier (2015) contends that supervisors tend to focus on administration rather than pedagogy, because they have much power. Further efforts like the search for well trained and committed teachers to become head teachers, to make them supervise and recommend teacher's works, lesson plans and teaching methodologies, promote, guide and advice teachers appears to be valueless on improving students' academic achievement in science subject not only in Kween district but also in other secondary schools that share the same plight like those in Kween district performance.

Hendrawijaya *et al* (2020), asserts that teacher absence has a large and detrimental effect on student performance. One of these failures is in spending less time in classroom duties, and many documents show that teacher absenteeism is a large contributor to wasteful spending of government resources. Basically, teachers who are at school more regularly have students who do better on standardized testing than the students of teachers who are absent frequently (Memon, 2017). What it comes down to is that teacher absenteeism affects the entire school. Everyone in the school environment is unsure of how the day will go. Students tend to act out more for substitute teachers. Anyway, the learning that takes place in the classroom environment is negatively impacted by teacher absenteeism. Recent ministerial reports, however, indicate some challenges in teacher role performance characterized by absenteeism, lateness and poor use of instructional time. The Metropolitan Annual Performance Reports on Education for Kampala city pronounced teacher absenteeism and lateness especially in the first week of reopening in senior secondary schools (MoES, 2022). One of the problems presented by Heneveld & Craig (2016) is related to the poor application of technology in learning of science subjects in most schools. The process teaching and learning science subjects' demands integration of ICT and other blended teaching in line with the curriculum, where students are involving in self-research in exploring science knowledge discovered by

other scholars. All these can be achieved only if the improved support supervision and embracing the changing dynamics in the ideal teaching and learning process as a basis to improve students' academic achievement in science subjects.

It is unfortunate that over 80% of Uganda's secondary school entities are not sufficiently endowed with computers and internet services or even the application to improve science performances (MoES, 2020). Relatedly, though a number of government secondary schools have acquired science laboratories for enriching core science subject teaching, many do not have the materials/equipment for demonstrating understanding on practical subjects to learners, and others lack the trained or professional teachers for handling them (Kartini, Kristiawan & Fitria, 2020). All these are issues and challenges surrounding inefficiency in the implementation of support supervision that must be thoroughly addressed for secondary schools to achieve desired students' academic achievement in science subjects in Kween district.

2.4 Strategies for Strengthening the Implementation of Support Supervision on the Students' Achievement in Science Subject

Isdaryanti *et al* (2022) notes that, professional effectiveness comes from being guided by a skilled supervisor with regard to appreciating, recognizing and knowing supervisees' strengths and limitations; where the supervision skills of head teachers in making this a reality demands emphasis. Head teachers are usually guided by such criteria as lesson observation proforma constructed by the school or inspectors of schools. Head teachers need to design essential requirement for effective curriculum delivery by teachers. This view is supported by Tanak (2020) who intimated that the design or what are to be essential attributes of good teaching rests on the teachers' mastery of the content and above all head teachers' competence in supervisory skills.

Effective teachers use a wide variety of strategies to interact with their students. The interactions go beyond the classrooms. Teachers who attend sporting activities, concerts and other special programs with their students are highly valued by their students (Kartini, Kristiawan & Fitria, 2020). The authors found that constructive interactions between teachers and students not only contribute to student leaning and achievement, but also increase students' self-esteem by fostering feelings of belonging to the classroom and the school. Through these interactions teacher is able to individually, realistically, and successfully challenge each and every student to succeed. Pelletier (2015) opined that teachers'

enthusiasm for teaching, learning and for the subject matter is an important part of effective teaching both in supporting positive relationship and encouraging student performance through provision of extrinsic motivation to students who need it (Pelletier, 2015). Teachers' involvement with graduate studies, which indicate enthusiasm for learning may be a source of motivation and may translate into higher achievement among students.

Memon, (2017) reveals that since students have differences in motivation interests and abilities and they also differ in health, personal and social adjustments and creativity, generally good teaching is best done with prudent time management, lesson plans and above all teachers' commitment to making schemes and recognizing students' social economic background. Scheerens & Ehren (2015) notes that, effective teachers continually practice self-evaluation and self-critique as learning tools; in that way, they portray themselves as learners by constantly providing opportunities to improve their lessons, reach particular needy students and seek and try new approaches in the classroom to better meet the needs of their learners. They seek to understand teaching through scholarly study or professional reading. They are not afraid of feed-back; they elicit information and criticism from others as they reflect upon it and learn from.

Hendrawijaya *et al* (2020) believe that, professional development keeps teachers abreast of current trends in education, helps them to be innovative and proactive. Effective teachers respond to misbehavior at an individual level rather than holding a whole class responsible for the actions of one student or a small group of students; they thus ensure fairness and earn respect. Teachers' professional competence often translates into high quality teaching with expectation that would influence the learning of pupils. The professional skills of the teacher establish a productive classroom atmosphere from the start by means of good communication and carefully planned teaching strategies (Okendu, 2013). There is need for the MoES to develop school supervision framework that creates an environment supportive to both teachers and school heads to use their collective expertise in self-appraisal of teachers, to identify gaps in teacher skills, knowledge and competencies in order to provide the vital support needed for teachers' professional development for instilling knowledge both theoretically and scientifically. According to Mette, Aguilar & Wieczorek (2020), direct influence on improving practical subjects that demand commitments from the school supervisors, teaching staff and the learners themselves. Therefore, for the support supervision to be successful there should realistic supporting environment schools for the supervisors,

supervisees and students as well because they are the direct beneficiaries of the teaching and learning outcomes.

Penzer (2016) revealed that school heads must be keen in checking students' assessment records, such as notes given by teachers and class exercises, to ensure that teachers are effectively carrying out instructional activities. Thus; the assessment of students in any educational setting is of paramount importance to the success of such institutions. However, assessment to be meaningful must be well planned and timely feed must be given to respective people to the effect if the students' academic achievement in science subject is to be achieved.

Heneveld & Craig (2016) argued that, availability of learning materials affects the effectiveness of teachers' lessons. The creative use of variety of media increases the probability that a student will learn more, retain better what they learn and improve their performance on the skills that they are expected to develop. Research has consistently shown that schools with well-staffed and well-resourced libraries and with librarians acting effectively in their role as program administrators, teachers/trainers, and information technology access providers have higher scores on state tests. At this point it is pertinent to realize that manpower is the most important resource in any struggle for organization development (Starratt, 2014). This implies that if support supervision in Kween district is adhered to, teachers would be charged with the task of improving students' academic achievement in science subjects as well as the quality of education by making all the required preparations that would help to realise the desired learning outcomes meaningful different stakeholders in Kween district.

Subsequently, science teaching requires a complex and inter-connected nuance of understanding among the three main sources of knowledge, namely technology, pedagogy, content and how these three sources are applied according to science their context. In facing the development of science and technology, therefore teachers must be able to prepare themselves to develop science teaching activities with technology, which is still a big gap in the secondary school learning in the rural school establishments (Skourdoumbis, 2019). Teachers are expected to regularly assess students with the aim of enhancing students' performance, whereas school heads oversee the appropriate execution of teachers' assigned responsibilities, which includes assessment of students' commitments to science subjects. This is applicable to the study because the monitoring of teachers' schemes of work and

lesson plans which is expected to be done daily, weekly, monthly and termly to check for the content coverage and breakage, thus the improvement of students' academic achievement in science subject in selected secondary schools in Kween District. However, the question remains whether the aforementioned is being followed and adhered to in Kween District.

Resource empowerment is important in support supervision as well as improving students' academic achievement in the science subjects, teacher training is one of the strategies for sustainable professional development. Jensen (2013) notes the demand for the science-teachers' professional development through further trainings in teaching service delivery. The development of modern times, teachers must constantly update and upgrade various knowledge and understanding of learning to suit the development of schools, the characteristics of students, and the development of science and technology, one of which is by participating in various trainings. Training can provide new skills that are useful for teachers as teachers who deliver learning material to become facilitators who guide students to make learning easier. according to Yusnita *et al* (2018), training given to teachers is one of the activities used to prepare teachers to face the progress of the times. Training is able to increase teacher knowledge and competence so that they are able to collaborate learning strategies with technology that are the demands of 21st century education.

2.5 Conclusion of Literature

Support supervision is considered as independent follow up for ameliorating the academic performance that was given to students and it always aim to make improvement where weakness is found. School inspection could be used as the main tool to be used by government stakeholders in drawing long terms strategies for quality education. The stakeholders may consider different variables mainly the ability of teachers and the existence of other variables that may have an influence on education outcome. As Uganda is struggling for quality education achievement, different strategies have been put in place; including establishment of basic infrastructure (classrooms, laboratories, electricity) professional development of teachers and all educational officials, curriculum change from knowledge-based to competence-based one; provision of necessary instructional materials through capitation grant.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents combination research methods that were used in data collection and they included; Research design, the study area, study population, sample size and sampling techniques, Data collection methods, Quality control methods, data management and processing, data analysis, ethical considerations as well as the anticipated constraints of the study.

3.1 Research Design

A research design is a plan of what data to gather from whom, how and when to collect data as well as how to analyze the data collected (Kothari, 2006). In order to achieve the objectives of the study, a descriptive cross section survey design based on questionnaires and interviews were used because the study objectives are descriptive in nature and require taking care of multiple realities likely to be encountered in the field (Amin, 2005). This method is easy to manage and administer (Mugenda & Mugenda, 2003). Quantitative method was used to determine the extent and the rate of the problem under study. The emphasis was put on collecting data from; DEO, inspectors of the schools, head teachers, teachers and students using questionnaires and interviews. However, data collected was edited for correctness and summarized graphically or diagrammatically.

3.2 Area of the Study

The study was carried from selected secondary schools within Kween district. The district is found in the MT. Elgon region of eastern Uganda. Kween district is located within the geographical coordinates of 1°22'38.4"N (1.3773200°), 34°34'28.4"E (34.5745600°), and bordered by Kenya to the north, Sironko district to the south, Bukwo district to the east and Kapchorwa district to the west. Secondary school coverage is averagely fair. That is to say, at least one school per sub-county.

3.3 Study Population

According to Oso and Onen (2009), study population is the total number of subjects or the total environment of interest by the researcher. It is the target population which the researcher intends to pick samples from for data collection and investigation (Mugo, 2011). It should be

noted that Kween district has both governments aided and privately owned secondary schools but the study will only consider selected government aided selected secondary schools. The target population for the study included the; Head teachers, teachers, district education officers (DEO and DIS), and students from selected government aided secondary schools in Kween district. The category was of target because they are directly responsible for the whole teacher and learner welfare in the school. The target population totaled to 6314 from where the sample was drawn.

3.4 Sample Size and Sampling Techniques

3.4.1 Sample Size

This is the number of units that were selected from the population on which data was collected. The sample was selected as a representative of the entire population because it makes it practical and smaller to manage when it comes to data collection (Musuka, 2014). In this study 40 Science teachers, 05 head teachers, 50 students, 1 DEO and 1 DIS, as a representative sample in the study because it could provide necessary and required information on teacher support supervision and students' achievement in science subjects in Kween district.

Table 3.1: Sample size and Techniques by Category of Respondents

Category of Respondents	Study Population	Sample Size	Technique of Sampling
Teachers	288	40	Simple Random Sampling
Head teachers	12	5	Simple Random Sampling
DOS	12	5	Simple Random Sampling
DEO/DIS	2	2	Purposive Sampling
Students	6000	50	Simple Random Sampling
Total	6314	102	

3.4.2 Sampling Procedure and Techniques

Sampling procedure is a technique of selecting a sub group from a population to participate in the study. It is a process of selecting a number of individuals for a study as a representative of

the entire population (Ogula, 2015). Probabilistic and non-probabilistic sampling was used and these included; purposive and simple random sampling were used to select the sample for the study. In this study only; out of 288 teachers only 40 science teachers were considered taking 8 science teachers from each school, 50 students out of 6000 students were selected using simple random sampling taking 10 students from each school. This was because every component of the population had an equal and independent chance of being selected for the sample and this helped to minimize the would biases during the study. While 05 DOS, 05head teachers,01 DIS and 01 DEO were selected using Purposive Sampling. This was so because they are directly involved in enforcement of support supervision and monitoring of teaching and learning activities in schools.

3.5 Data Collection Methods/Data Collection Instruments

This section tried to highlight the data collection methods and instruments as below;

3.5.1 Data Collection Methods

Data is anything admitted as a fact on which a research inference can be based on (Oso & Onen, 2009). Data collection methods are means of gathering information to address research questions or research variables stated by the researcher (Athukorala, 2011). A number of data collection methods were employed to collect data from different respondents and they included; Interviews, Questionnaires and Documentary Review as follows;

3.5.1.1 Interview

Interviewing is a method of collecting qualitative data through question-and-answer approach with the interviewee through face-to-face interactions (Kothari, 2006). Face to face interviews were used to collect data from the head teachers, district inspector of schools and DEO. This method provided in-depth information about respondents' feelings, attitudes, knowledge which was very important for this study.

3.5.1.2 Questionnaires

The Questionnaires were framed and distributed to the respective categories of the respondents to enable them provide answers. The questionnaires were directly administered to the respondents selected from the respondent categories.

3.5.1.3 Focus Group Discussion

This is a method where the researcher assembled a group of individuals to discuss a particular issue with the aim of drawing information from a complex individual experience, perceptions

and attitudes of the individual Participants through a moderated interaction (Bennet et. al 2017). The focused group discussion allowed the researcher to select group of participants with whom a moderated discussion on a given topic. The group is usually selected due to pre-defined demographic characteristics where guiding questions were made to give light on the problem under study. In this case, the method was used on students who were selected in ten groups from the two schools. This helped to create a free atmosphere for the sharing of experiences of learners.

3.5.2 Data Collection Instruments

A number of data collection instruments were used to collect data from different respondents and they included; Interview Guide, Questionnaire Forms and Documentary Review Analysis as below;

3.5.2.1 Interview Guide

Interview guides were designed by the researcher to collect data from the head teachers, district inspector of schools and DEO. District inspector of schools and DEO provide oversight management role to schools and they frequently interface with both Head teachers and teachers and so they provided evident data on the students' academic achievements in science subjects. Therefore, the researcher was able to collect qualitative data through question-and-answer approach which supplemented the information from the questionnaires forms.

3.5.2.2 Questionnaire Forms

Oso & Onen (2009), define Questionnaire forms are a collection of items to which a respondent is expected to react usually in writing. Questionnaire helped the researcher to collect information needed in a short time. Questionnaire forms were a suitable instrument for collecting information from literate respondents or large population and provides an opportunity for respondents to give their independent response (Oso & Onen, 2009). Questionnaires forms to be used were both close-ended and open-ended. The design of the questions was in accordance to research objectives. A five-points Likert scale rating was used with: strongly agree (SA); agree (A); neutral (N); disagree (D) and strongly disagree (SD) was used to get the views of the teachers, head teachers and education officers.

3.5.2.3 Focus Group Discussion Guide

This is data collection a tool with interactive questions that provide guidance to the researcher in gathering information from the chosen group of participants who are normally selected due

to pre-defined demographic characterization. This data collection tool is usually preferred when dealing with a group of participants/respondents who share common interest. This was used to collect information from the students about the support supervision on the students' achievements in science subjects.

3.6 Quality Control Methods

To ensure the quality of the data collected, two quality control measures were employed and these included; Validity and Reliability as below;

3.6.1 Validity

Validity is defined as the appropriateness of the instrument i.e. the ability of the instrument to measure what it was intended to measure accurately and produce findings that are in agreement with theoretical values, Amin (2005). The tools (questionnaire and interview guides) developed were shared with the supervisor as an expert and corrections that were made were adhered to by the researcher to make sure that the tools are in line with objectives of the study.

3.6.2 Reliability

This is the consistency of the instrument in measuring what was intended to measure (Amin, 2005). That is, the results that the tool produces if used to measure the same variable at the same time should be consistent. Therefore, in this study the collection instruments were pre-tested for clarity and to eliminate repetition, and bulkiness. Piloting of the instruments was done in one school outside the study area. This was done carefully in order to ensure dependability of the data collected.

3.7 Data Analysis

Data collected was analyzed using statistical package for social sciences (SPSS) and the multiple linear regression which is inferential was run to evaluate the interaction of support supervision and students' performance. This enabled the researcher come up with reliable conclusions about the variables. Descriptive statistics such as mean, mode, percentages and frequency distribution were used to describe and assess the implementation status of support supervision.

3.8 Ethical Considerations

Ethical consideration covered four main areas, namely; informed consent, privacy and confidentiality, anonymity, and the assessment responsibilities. Before travelling to the field

for the actual data collection (after the pre-test), prior authorization was obtained from the university administration. In addition, the enumerator sought the consent from the respondents for permission to interview them i.e. the enumerator explained in details the assessment background, purpose, duration, unforeseen risks etc., before proceeding with the interview. Even during the interview periods, the principle of privacy and confidentiality was observed. The researcher also explained to the respondents the purpose of the study and the administration of the research tools. All these was done with the purpose of creating a very good relationship between the researcher and the respondent so that none of them can look at each other as a stranger, and at the end of it all, qualitative data was obtained.

3.9 Limitations and Delimitations of the Study

There may be shortage of funding the study since it requires much money, for transport, communication, computerization, photocopying etc. There was also a challenge with accessibility to the respondents especially during the rainy season. This was overcome by working within the available means and making appointments with the concern respondents in time.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter covers the presentation, analysis and discussion of study findings regarding the effectiveness of support supervision on students' performance in science subjects from selected government aided secondary schools in Kween District. The chapter starts by presenting data regarding the respondents' demographic findings, descriptive statistics which entail percentages, mean and standard deviation, inferential analysis which also entails correlation and regression analysis as follows;

4.1 Response Rate

This sub-section presents data regarding the response rate of the study.

Table 4.1: Response Rate

Tool	Targeted	Returned	Response
Teachers	40	37	93%
Interviews	12	10	83%
Students	50	45	90%
Overall	102	92	90%

Source: *Field Data (2024)*

Table 4.1 reveals that 40 teachers were targeted to fill the questionnaire but only 37 of the questionnaires issued were filled and returned thereby forming a response rate of 93%. Similarly, the targeted interviews were 12 and only 10 were successfully carried out forming a response rate of 83%. Additionally, 50 students were meant to be engaged in the study but only 45 were reached out to for their response hence forming a response rate of 90%. On overall, the response rate was 90% and this is considered adequate enough for analysis as per the recommendations of Holbrook, Jon, and Alison (2007) who considers a response of 60% as being adequate.

4.2 Demographic Data of Respondents

This section presents the demographic data of the respondents in terms of age, gender, education level and work experience.

4.2.1 Gender

This section presents data concerning the gender of the respondents in terms of male and female. Data presented in this section is for both teachers and students.

Table 4.1: Gender of the respondents

	Frequency	Percent
Male	49	53.3
Valid Female	43	46.7
Total	92	100.0

Source: Field Data (2024)

Table 4.1 indicates that majority of the respondents in this study were male as represented by 53.3% and only 46.7% were female. The findings mean that most of the participants in this study were male and thus implying that the schools were dominated by them. However, responses were also obtained from the female participants hence balanced views were obtained from both genders.

4.2.2 Age Bracket

This section presents data regarding the age bracket of the respondents in terms of number of years as indicated in table 4.3 below;

Table 4.3: Age Bracket for all Respondents

	Frequency	Percent
20 years and below	45	48.9
21-30 years	13	14.1
31-40 years	13	14.1
41- 51 years	21	22.9
Total	92	100.0

Source: Field Data (2024)

Findings in the table above reveal that 48.9% of the respondents were below 20 years and these were the students, 22.9% were between 41-51 years, 14.1% were 31-40 years while another 14.1% were 21-30 years. This means that most of the respondents were young since they were learners. However, the other categories of respondents were mature enough to provide the needed supervisory support to ensure that learners excelled.

4.2.3 Education Level

This section presents data regarding the education level of the respondents and the main focus here was on the teachers. Data collected was analysed and presented in the table below;

Table 4.4: Education Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	19	51.3	51.3	51.3
Bachelor’s degree	16	43.2	43.2	94.6
Master's degree	2	5.4	5.4	100.0
Total	37	100.0	100.0	

Source: Field Data (2024)

Table 4.4 reveals that 51.3% of the respondents in this study were diploma holders, followed by 43.2% who were degree holders and only 5.4% of the respondents had master’s degree. The findings mean that most of the respondents were diploma holders implying that they met the minimum qualification for one to teach and this implies that the respondents were able to give valid responses since they seem to know how to read and write.

4.2.4 Experience

This section presents data regarding the work experience of the respondents and the main focus here was on the teachers. Data collected was analysed and presented in the table below;

Table 4.5: Duration of work

	Frequency	Percent	Valid Percent	Cumulative Percent
1 year and below	2	5.4	5.4	5.4
2-6 years	8	21.6	21.6	27.0
Valid 7-11 years	20	54.0	54.0	81.1
12 years and above	7	18.9	18.9	100.0
Total	37	100.0	100.0	

Source: Field Data (2024)

Table 4.5 shows that 54.0% of the respondent had worked for 7-11 years, 21.6% had worked for 2-6 years, 18.9% had worked for 12 years and above and 5.4% had worked for 18.9%. This means that most of the respondents had attained enough experience to be able to carry out the support supervision well by guiding learners.

4.3 Descriptive Findings

This section presents findings regarding the various aspects of support supervision and students' academic achievement in science subjects. The descriptive findings used include percentages, mean and standard deviation as per the study specific objectives.

4.3.1 Descriptive Findings on Forms and Status of support supervision

The first objective of the study was to establish the forms and status of support supervision on students' achievements in science subjects in the selected government aided secondary schools in Kween district. Data on this variable was collected, analyzed and presented in the table below;

Table 4.6: Descriptive Findings on Forms and Status of Support Supervision

Question statement	SD	D	U	A	SA	Mean	Std Dev
Education supervision relates to overseeing function school by offering advisory and consultancy services in the areas of subject specialization and giving guidance which helps to improve teachers' performance.	16.2%	18.9%	5.4%	27.0%	32.4%	3.41	1.518
Support Supervision is assistance or guidance accorded by a leader to a classroom teacher to enable him/her performs his or her teaching role effectively	8.1%	16.2%	10.8%	54.1%	10.8%	3.43	1.144
Supervision involves evaluating education activities to further find a follow-up to the problems	2.7%	13.5%	0.0%	40.5%	43.2%	4.08	1.115

faced in ensuring better academic performance and quality education as a whole.							
Instructional supervision is required in education to ensure uniformity and effectiveness of educational programs to promote teaching and learning.	2.7%	10.8%	2.7%	54.1%	29.7%	3.97	1.013
Performance is any activity outcome (usually measured by the level of efficiency and effectiveness or quality and quantity); where academically can be poor, good or excellent.	0.0%	18.9%	2.7%	37.8%	40.5%	4.00	1.106
Teacher performance is the extent to which teachers in a school achieve the requirements of their assign responsibilities in an effort to fulfill school-required goals and objectives.	2.7%	27.0%	5.4%	51.4%	13.5%	3.46	1.120
Teachers' supervisory roles include development of good instructional documents, effective lesson delivery, regular assessment of students, regular and punctual school and class attendance, effective use of instructional time, and exhibiting good working relations.	5.4%	21.6%	10.8%	56.8%	5.4%	3.35	1.060

Source: Field Data (2024)

Regarding whether education supervision relates to overseeing function school by offering advisory and consultancy services in the areas of subject specialization and giving guidance which helps to improve teachers' performance, findings presented in the table above reveal

that 27.0% and 32.4% of the respondents were agreeing to the statement, 18.9% and 16.2% were disagreeing while 5.4% were uncertain about the statement. The stated mean ($\mu = 3.41$; Std Dev = 1.518) indicate that there was a high variation in responses much as most of the respondents were agreeing. The findings imply that Education supervision relates to overseeing function school by offering advisory and consultancy services in the areas of subject specialization and giving guidance which helps to improve teachers' performance. An interviewee stated that;

The supervision we provide here is specific and aimed at ensuring that key subject areas are emphasized for the different teachers. This has been of great help as it has assisted use remind the teachers of their duty to provide quality lessons to learners.

On finding out whether assistance or guidance accorded by a leader to a classroom teacher to enable him/her performs his or her teaching role effectively, findings presented in the table above reveal that majority of the respondents 54.1% and 10.8% were agreeing to the statement, followed by 16.2% and 8.1% who disagreed while 10.8% were uncertain about the statement. The findings are supported by a mean ($\mu = 3.43$; Std Dev = 1.144) which signify that Support Supervision is assistance or guidance accorded by a leader to a classroom teacher to enable him/her performs his or her teaching role effectively. This is in line with (Atiah, Fitria & Destiniar, 2020) who assert that direct supervision as a form of instructional supervision encompass all the measures by the school head to facilitate one-on-one feedback with teachers to enhance instruction and professional capacity.

On inquiring whether supervision involves evaluating education activities to further find a follow-up to the problems faced in ensuring better academic performance and quality education as a whole, findings presented in the table above reveal that 40.5% and 43.2% of the respondents were agreeing with the statement, followed by 13.5% and 2.7% of the respondents who were disagreeing. The findings are supported by a mean score of 4.08 signifying that respondents were agreeing with the statement to a great extent and the standard deviation of 1.115 indicates a variance in responses. The findings mean that Supervision involves evaluating education activities to further find a follow-up to the problems faced in ensuring better academic performance and quality education as a whole. An interviewee stated that;

We normally do follow up after providing the supervision support and this helping us to realise better performance in terms of academics for our learners.

On inquiring whether instructional supervision is required in education to ensure uniformity and effectiveness of educational programs to promote teaching and learning, findings presented in the table above reveal that most of the respondents 54.1% and 29.7% were disagreeing with the statement, followed by 10.8% and 2.7% who disagreed while 2.7% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.97 and standard deviation of 1.013 which signify that respondents were agreeing with the statement and hence meaning that instructional supervision is required in education to ensure uniformity and effectiveness of educational programs to promote teaching and learning.

Regarding whether performance is any activity outcome (usually measured by the level of efficiency and effectiveness or quality and quantity); where academically can be poor, good or excellent, findings presented in the table above reveal that 37.8% and 40.5% were disagreeing with the statement, 18.9% were disagreeing while 2.7% of the respondents were uncertain about the statement. The stated mean score of 4.00 and standard deviation of 1.106 signify that respondents were agreeing with the statement and this means that performance is any activity outcome (usually measured by the level of efficiency and effectiveness or quality and quantity); where academically can be poor, good or excellent.

When asked whether teacher performance is the extent to which teachers in a school achieve the requirements of their assign responsibilities in an effort to fulfill school-required goals and objectives, results presented in the table above reveal that 51.4% and 13.5% of the respondents were agreeing with the statement, 27.0% and 2.7% were disagreeing while 5.4% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.46 and standard deviation 1.120 mean that teacher performance is the extent to which teachers in a school achieve the requirements of their assign responsibilities in an effort to fulfill school-required goals and objectives. This is supported by (Enaigbe, 2019) who noted that the principal as the school supervisor is required to participate in order to better understand education, to help control the management of education, including teacher competency development in science education. An interviewee noted that;

Our teachers are ever doing a great job and this has been the case because we provide them with the necessary support required to do their work.

Finally, on whether teachers' supervisory roles include development of good instructional documents, effective lesson delivery, regular assessment of students, regular and punctual

school and class attendance, effective use of instructional time, and exhibiting good working relations, findings presented in the table indicate that 56.8% and 5.4% of the respondents agreed with the statement, followed by 21.6% and 5.4% who disagreed while the least 10.8% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.35 and standard deviation of 1.060 which signify that teachers' supervisory roles include development of good instructional documents, effective lesson delivery, regular assessment of students, regular and punctual school and class attendance, effective use of instructional time, and exhibiting good working relations. The findings are in line with Robert, Woods & Ray (2018) who asserted that support supervision should ensure that teachers do early planning of lessons, effective lesson delivery, and proper use of teaching aids as well as strict follow up of the curriculum. An interviewee stated that;

Developing quality instructional materials is very key and as management we have always encouraged our teachers to ensure they have materials which can enable them deliver good quality services to the learners.

Table 4.7: Inferential Findings Forms and Status of Support Supervision Model

Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.457 ^a	.209	.186	.63240	.209	9.242	1	35	.004

a. Predictors: (Constant), Forms and Status

Source: Field Data (2024)

Table 4.7 reveals a model summary for the regressions on forms and status of support supervision. It is evident from the table that various forms and status of support supervision predict students' academic achievement in science subjects in Kween District by 20.9% as indicated by the R Square value while the remaining percent of 79.1% is predicted by other factors other than the forms and status. The table also reveals that there is a positive and significant correlation between various forms and status of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.457$. Therefore, that is the influence that the forms and status of support supervision have on learner academic achievement science subjects in Kween District. These findings are similar

to (Yusnita *et al*, 2018), it can be concluded that: support supervision has an effect on teacher performance and students' performance at large. Equally, the study by Memon, (2017) found a positive relationship between head teachers' inspection of teachers' schemes of work and performance of students in national exams.

4.3.2 Descriptive Findings on Challenges Affecting the Implementation of Support Supervision

The second objective of the study was to identify the challenges affecting the implementation of support supervision on students' achievement in science subjects in selected government aided secondary schools in Kween district. Data on this variable was collected, analysed and presented in the table below;

Table 4.8: Descriptive Findings on Challenges Affecting the Implementation of Support Supervision

Question statement	SD	D	U	A	SA	Mean	Std Dev
Learning institutions in Uganda faces the challenge of the low levels of academic performance in core science subjects (stemming from gaps administration and learning supervision)	0.0 %	8.1 %	5.4%	43.2 %	43.2 %	4.22	.886
School leadership incapacitation and scarcity of well-trained learning supervisors is one of the factors for the prevailing poor academic performance in secondary school levels	5.4 %	24. 3%	24.3 %	32.4 %	13.5 %	3.24	1.140
Supervisors' incapacitations to provide democratic/professional supervision have been proven to affect (negatively) the students' academic outcomes due to school administration and supervision gaps.	0.0 %	18. 9%	10.8 %	51.4 %	18.9 %	3.70	.996

The low level of empowerment provided to school supervisors is greatly weakening their professional supervision roles on effective service delivery towards better academic outcomes.	0.0 %	21. 6%	10.8 %	54.1 %	13.5 %	3.59	.985
Teachers' poor response to teaching roles and responsibilities is negatively affecting academic performance due to the non-completion of syllabus and classroom assessment.	5.4 %	13. 5%	16.2 %	51.4 %	13.5 %	3.54	1.070
The poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time	5.4 %	13. 5%	18.9 %	43.2 %	18.9 %	3.57	1.119
Teachers' performance to deliver teaching services are characterized by absenteeism, lateness and poor use of instructional time which has negative impacts on academic performance	8.1 %	27. 0%	13.5 %	43.2 %	8.1% %	3.16	1.167
The increasing level of teachers' absenteeism in class/school does not only contribute to poor students' but also wasteful spending of government resources.	2.8 %	13. 9%	0.0% %	41.7 %	41.7 %	4.06	1.120

Source: Field Data (2024)

On finding out whether learning institutions in Uganda faces the challenge of the low levels of academic performance in core science subjects (stemming from gaps administration and learning supervision), findings presented in the table above reveal that 43.2% and 43.2% of the respondents were agreeing with the statement, 8.1% were disagreeing while 5.4% were uncertain about the statement. The findings are supported by a mean score of 4.22 and standard deviation of 0.886 which signify that learning institutions in Uganda faces the challenge of the low levels of academic performance in core science subjects (stemming from gaps administration and learning supervision).

This has always been the case and our school is not an exception. I personally believe the government has not provided the much-needed support to enable schools perform well in science subjects.

On whether school leadership incapacitation and scarcity of well-trained learning supervisors is one of the factors for the prevailing poor academic performance in secondary school levels, findings presented in the table above reveal that 32.4% and 13.5% of the respondents were agreeing with the statement, followed by 24.3% and 5.4% were disagreeing while 24.3% of the respondents were uncertain about the statement. The stated mean score of 3.24 and standard deviation of 1.140 indicate that most of the respondents were agreeing with the statement. The findings mean that school leadership incapacitation and scarcity of well-trained learning supervisors is one of the factors for the prevailing poor academic performance in secondary school levels. The findings are supported by Obiweluzor, Momoh, & Ogbonnaya (2013) who identified shortage of inspectors/supervisors as the major challenge faced by institutions of learning in the supervision of student teachers in Uganda. An interviewee stated that;

We sincerely don't have enough personnel to carry out the support supervision and this is one of the reasons for the ever-increasing poor performance in science subjects.

On inquiring whether supervisors' incapacitations to provide democratic/professional supervision have been proven to affect (negatively) the students' academic outcomes due to school administration and supervision gaps, findings presented in the table above show that 51.4% and 18.9% of the respondents were agreeing with the statement, followed by 18.9% who were disagreeing while the least 10.8% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.70 and standard deviation of 0.996 which signify that supervisors' incapacitations to provide democratic/professional

supervision have been proven to affect (negatively) the students' academic outcomes due to school administration and supervision gaps. According to Penzer (2016) expressed concern about the many unprofessional practices carried out schools today that may have negative effect impact on our children.

Regarding whether the low level of empowerment provided to school supervisors is greatly weakening their professional supervision roles on effective service delivery towards better academic outcomes, findings presented in the table above reveal that 54.1% and 13.5% of the respondents were agreeing with the statement, followed by 21.6% of the respondent who were disagreeing while the least 10.8% of the respondents were uncertain about the statement. The stated mean score of 3.59 and standard deviation of 0.985 indicate that most of the respondents were agreeing that the low level of empowerment provided to school supervisors is greatly weakening their professional supervision roles on effective service delivery towards better academic outcomes.

On further inquiring on whether teachers' poor response to teaching roles and responsibilities is negatively affecting academic performance due to the non-completion of syllabus and classroom assessment, findings presented in the table above reveal that 51.4% and 13.5% agreed with the statement, 13.5% and 5.4% of the respondents disagreed with the statement while 16.2% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.54 and standard deviation of 1.070 signify that most of the respondents were agreeing with the statement. The findings mean that teachers' poor response to teaching roles and responsibilities is negatively affecting academic performance due to the non-completion of syllabus and classroom assessment. This is in line with Archibong (2014) who assert that supervision guides and manuals as some of the materials having big impact on supervisor's work.

As you may be aware that most teachers do not wholly commit themselves to teaching and this comes back to the students because they are not well attended to so they end up not performing well.

On whether the poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time, findings presented in the table above show that 43.2% and 18.9% of the respondents agreed with the statements, 13.5% and 5.4% disagreed while 18.9% were uncertain about the statement. The stated mean score of

3.57 and standard deviation of 1.119 indicate that most of the respondents were agreeing with the statement. The findings mean that the poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time.

Regarding whether teachers' performance to deliver teaching services are characterized by absenteeism, lateness and poor use of instructional time which has negative impacts on academic performance, findings presented in the table above reveal that 43.2% and 8.1% were agreeing with the statement, 27.0% and 8.1% of the respondents disagreed with the statement while 13.5% of the respondents were uncertain about the statement. The stated mean score of 3.16 and standard deviation of 1.167 indicate that most of the respondents were agreeing with statement. The findings mean that teachers' performance to deliver teaching services are characterized by absenteeism, lateness and poor use of instructional time which has negative impacts on academic performance. An interviewee stated that;

We have tried to minimize the rate of absenteeism among the teachers and this effort is directed towards ensuring that our learners are well attended to.

Finally, on considering whether the increasing level of teachers' absenteeism in class/school does not only contribute to poor students' but also wasteful spending of government resources, findings presented in the table above reveal that 41.7% and 41.7% of the respondents were agreeing with the statement, while 13.9% and 2.8% of the respondents were disagreeing with the statement. The stated mean score of 4.06 and standard deviation of 1.120 indicate that the respondents were agreeing with the statement. The findings mean that the increasing level of teachers' absenteeism in class/school does not only contribute to poor students' but also wasteful spending of government resources.

Table 4.9: Inferential Findings on Challenges of Implementation of Support Supervision Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.556 ^a	.310	.290	.59077	.310	15.697	1	35	.000

a. Predictors: (Constant), Challenges of Implementation of Support Supervision

Source: *Field Data (2024)*

Table 4.9 reveals a model summary regarding the challenges of implementing support supervision. It can be seen from the table that challenges associated with implementation of support supervision predict students' academic achievement in science subjects in Kween District by 31% as indicated by the R Square value while the remaining percent of 69% is predicted by other factors other than the challenges of implementation of support supervision. The table also reveals that there is a moderate positive and significant correlation between challenges of implementation of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.556$. Therefore, that is the influence that challenges of implementation of support supervision have on learner academic achievement science subjects in Kween District.

4.3.3 Descriptive Findings on Strategies for Strengthening the Implementation of Support Supervision

The third objective of the study was to identify the Strategies for Strengthening the Implementation of Support Supervision on the Students' Achievement in Science Subject. Data on this variable was collected, analysed and presented in the table below;

Table 4.10: Descriptive Findings on Strategies for Strengthening the Implementation of Support Supervision

Question statement	SD	D	U	A	SA	Mean	Std Dev
Building the capacity of supervisors on their roles would enable them perform professionally and effectively on the achievement of set goals.	8.1%	40.5%	13.5%	29.7%	8.1%	2.89	1.173
Instructional supervision should be conducted in such a way that it provides a vehicle and a structure which allows schools, departments and individuals to effectively respond to curriculum and instruction	10.8%	43.2%	13.5%	32.4%	0.0%	2.68	1.056

There is need for head teachers to regularly visit the classrooms and observe lessons for the purpose of motivating teachers to work towards improving students' performance.	24.3%	48.6%	13.5%	10.8%	2.7%	2.19	1.023
Quality of teaching highly depends upon teachers' knowledge and the level of support offered (support supervision); which calls for schools to intensify supervision so as to support teachers to perform highly in the classrooms.	0.0%	37.8%	13.5%	48.6%	0.0%	3.11	.936
Support supervision content demands collective planning where time limit is set for various tasks like time to submit schemes of work, lesson plans, records of work covered and student assessment results.	8.1%	40.5%	24.3%	16.2%	10.8%	2.81	1.151
Adhering to the allocated time promotes timely completion of syllabus i.e. students are not blamed for exam's failure due to incomplete syllabus coverage.	10.8%	40.5%	13.5%	29.7%	5.4%	2.78	1.158
Effective performance requires goal setting and clear job description because individuals	0.0%	32.4%	2.7%	48.6%	16.2%	3.49	1.121

who set goals are motivated to work towards them to achieve them regardless of other factors.							
Support supervision is one of the strategies for sustainable professional development that provide new skills useful for guiding students to make learning easier.	13.9%	19.4%	11.1%	41.7%	13.9%	3.22	1.312

Source: *Field Data (2024)*

On finding out whether building the capacity of supervisors on their roles would enable them perform professionally and effectively on the achievement of set goals, findings presented in the table above reveal that 29.7% and 8.1% of the respondents agreed with the statement, 40.5% and 8.1% were disagreeing while 13.5% of the respondents were uncertain about the statement. The findings are supported by a mean score of 2.89 and standard deviation of 1.173 signify that most of the respondents were disagreeing with the statement. This means that Building the capacity of supervisors on their roles would not enable them perform professionally and effectively on the achievement of set goals.

On whether instructional supervision should be conducted in such a way that it provides a vehicle and a structure which allows schools, departments and individuals to effectively respond to curriculum and instruction, findings presented in the table above reveal that 32.4% of the respondent agreed with the statement, 43.2% and 10.8% disagreed with the statement while 13.5% of the respondents were uncertain about the statement. The findings are supported by a mean score of 2.68 and standard deviation of 1.056 indicating that most of the respondents were disagreeing with the statement. The findings mean that instructional supervision should not be conducted in such a way that it provides a vehicle and a structure which allows schools, departments and individuals to effectively respond to curriculum and instruction. According to (Kartini, Kristiawan & Fitria, 2020), teachers who attend sporting activities, concerts and other special programs with their students are highly valued by their students.

On whether there is need for head teachers to regularly visit the classrooms and observe lessons for the purpose of motivating teachers to work towards improving students'

performance, findings presented in the table above reveal that 10.8% and 2.7% agreed with the statement, 24.3% and 48.6% of the respondents disagreed with the statement. The findings are supported by a mean score of 2.19 and standard deviation of 1.023 indicate that the respondents were disagreeing with the statement. The findings mean that there is no need for head teachers to regularly visit the classrooms and observe lessons for the purpose of motivating teachers to work towards improving students' performance.

I think visiting classroom is not a good strategy in support supervision because this may make the teachers feel uncomfortable and hence may further affect their output. This supervision can be done by a mere look at what the teachers are delivering.

Regarding whether quality of teaching highly depends upon teachers' knowledge and the level of support offered (support supervision); which calls for schools to intensify supervision so as to support teachers to perform highly in the classrooms, findings presented in the table above reveal that 48.6% of the respondents were agreeing with the statement, followed by 37.8% who disagreed while 13.5% of the respondents were uncertain about the statement. The findings are supported by a mean score of 3.11 and the standard deviation of 0.936 indicates that most of the respondents were agreeing with the statement. This implies that quality of teaching highly depends upon teachers' knowledge and the level of support offered (support supervision); which calls for schools to intensify supervision so as to support teachers to perform highly in the classrooms. The findings are supported by Scheerens & Ehren (2015) who notes that, effective teachers continually practice self-evaluation and self-critique as learning tools; in that way, they portray themselves as learners by constantly providing opportunities to improve their lessons, reach particular needy students and seek and try new approaches in the classroom to better meet the needs of their learners. An interviewee stated that;

Of course, teachers who are knowledgeable do deliver quality lessons to the learners and make them understand faster than those we less knowledge in a given subject area.

Concerning whether support supervision content demands collective planning where time limit is set for various tasks like time to submit schemes of work, lesson plans, records of work covered and student assessment results, findings presented in the table above reveal that 16.2% and 10.8% of the respondents were agreeing with the statement, 40.5% and 8.1% disagreed while 24.3% of the respondents were uncertain about the statement. The stated mean score of 2.81 and standard deviation of 1.151 signify that the respondents were

disagreeing with the statement. The findings impliedly mean that support supervision content demands collective planning where time limit is set for various tasks like time to submit schemes of work, lesson plans, records of work covered and student assessment results.

On whether adhering to the allocated time promotes timely completion of syllabus i.e. students are not blamed for exam's failure due to incomplete syllabus coverage, findings presented in the table above reveal that 29.7% and 5.4% of the respondents were agreeing with the statement, while 13.5% of the respondents were uncertain. The findings are supported by a mean score of 2.78 and standard deviation of 1.158 which signifies that the respondents were disagreeing with the statement. The findings mean that adhering to the allocated time does not promote timely completion of syllabus i.e. students are not blamed for exam's failure due to incomplete syllabus coverage. An interviewee stated that;

This is very true because when we drafting a timetable, we first look at the content of a certain subject and so by allocating a specific time we are always sure that the teachers can be able to complete the syllabus on time and help the learners to excel.

On whether effective performance require goal setting and clear job description because individuals who set goals are motivated to work towards them to achieve them regardless of other factors, findings presented in the table above reveal that 48.6% and 16.2% of the respondents were agreeing with the assertion, followed by 32.4% of the respondents who disagreed while 2.7% of the respondents were uncertain about the statement. The mean score of 3.49 and standard deviation of 1.121 indicate that the respondents were agreeing that effective performance require goal setting and clear job description because individuals who set goals are motivated to work towards them to achieve them regardless of other factors.

Considering whether support supervision is one of the strategies for sustainable professional development that provide new skills useful for guiding students to make learning easier, results presented in the table above show that 41.7% and 13.9% of the respondents were agreeing with the statement, 19.4% and 13.9% were disagreeing while 11.1% of the respondents were uncertain about the statement. These findings are also supported by a mean score of 3.22 and standard deviation of 1.312 indicates that respondents were agreeing with the statement. The findings mean that support supervision is one of the strategies for sustainable professional development that provide new skills useful for guiding students to make learning easier. Penzer (2016) revealed that school heads must be keen in checking

students' assessment records, such as notes given by teachers and class exercises, to ensure that teachers are effectively carrying out instructional activities.

Table 4.11: Inferential Findings on Strategies for Strengthening the Implementation of Support Supervision

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.732 ^a	.535	.522	.48461	.535	40.340	1	35	.000

a. Predictors: (Constant), strategies for strengthening the implementation of support supervision

Source: Field Data (2024)

Table 4.11 shows a model summary regarding the strategies for strengthening the implementation of support supervision. It can be observed from the table that strategies for strengthening the implementation of support supervision predict students' academic achievement in science subjects in Kween District by 53.5% as indicated by the R Square value while the remaining percent of 46.5% is predicted by other factors other than strategies for strengthening the implementation of support supervision. The table also reveals that there is a strong positive and significant correlation between strategies for strengthening the implementation of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.732$. Therefore, that is the influence that strategies for strengthening the implementation of support supervision have on learner academic achievement science subjects in Kween District.

4.3.3 Descriptive Findings on Students' Academic Achievement

This section focuses on the respondents' perceptions regarding Students' Achievement in Science Subject. Data on this variable was collected, analysed and presented in the table below;

Table 4.12: Descriptive Findings on Students' Academic Achievement

Question Statement	SD	D	U	A	SA	Mean	Std Dev
Teachers' support supervision improves education outcomes through strengthening relationships within systems, identification and resolution of problems, motivating staff, and optimizing resource allocation for science subjects.	10.8%	56.8%	21.6%	5.4%	5.4%	2.38	.953
Teachers' support supervision enriches and influences better education understanding, which helps to control teaching management, including teacher competency development in instilling knowledge and skills for improved academic outcomes in science subjects.	18.9%	45.9%	13.5%	16.2%	5.4%	2.43	1.144
Learning supervision demonstrated in checking of students' notes, class exercises examination and marking schemes, improves students' commitment to learn as often reflected in better academic performance in science subjects.	18.9%	59.5%	18.9%	0.0%	2.7%	2.08	.795
Supervision activities such as classroom visits, interactive and collaborative professional trust between school supervisors and	10.8%	35.1%	24.3%	24.3%	5.4%	2.78	1.109

teaching staff members, regular supervision contribute to teachers' commitment towards achieving better academic performance in science subjects							
Support supervision improves teachers' commitment to teach, which has been found vital in enhancing the pedagogical competences of teachers to perform and realize better academic outcomes in science subjects	5.4%	27.0%	21.6%	40.5%	5.4%	3.14	1.058
Support supervision improves schools and students' achievements in science subjects by helping teachers to deliver (adequately) in their role performance on learning progress and school development.	13.5%	24.3%	8.1%	54.1%	0.0%	3.03	1.166
Support supervision improves the quality of teachers and teaching, which has direct influence (positive) to students' performance in science subjects.	0.0%	2.7%	8.1%	62.2%	27.0%	4.14	.673

Source: *Field Data (2024)*

On Teachers' support supervision improves education outcomes through strengthening relationships within systems, identification and resolution of problems, motivating staff, and optimizing resource allocation for science subjects, findings presented in the table 4.12 above reveal that 5.4% and 5.4% of the respondents were agreeing with the statement, 56.8% and 10.8% disagreed while 21.6% of the respondents were uncertain about the statement. The stated mean score of 2.38 and standard deviation of 0.953 indicate that most of the

respondents were disagreeing with the statement. The findings therefore mean that support supervision does not improve education outcomes through strengthening relationships within systems, identification and resolution of problems, motivating staff, and optimizing resource allocation which helps to improve learners' academic achievement in science subjects. An interviewee stated that;

It is a good practice to always be able to provide expert advice to the teachers regarding optimizing resource allocation by the supervisors as this shall help the teachers get to learn and administer good work to learners.

Focus Group Discussion revealed that;

We rarely see the Head Teacher coming to see what the teachers are teaching us in class. We only meet in the office and express to them our concerns where we feel the teacher didn't make us understand.

Concerning whether teachers' support supervision enriches and influences better education understanding, which helps to control teaching management, including teacher competency development in instilling knowledge and skills for improved academic outcomes in science subjects., findings presented in the table 4.12 above indicated that 16.2% and 5.4% agreed with the statement, 45.9% and 18.9% disagreed with the statement while 13.5% of the respondents were uncertain about the statement. The findings are supported by a mean score of 2.43 and standard deviation of 1.144 indicate that respondents were agreeing with the statement. The findings implied that teachers' support supervision enriches and influences better education understanding, which helps to control teaching management, including teacher competency development in instilling knowledge and skills for improved academic outcomes in science subjects.

Regarding whether learning supervision demonstrated in checking of students' notes, class exercises examination and marking schemes, improves students' commitment to learn as often reflected in better academic performance in science subjects, findings presented in the table above reveal that 2.7% agreed with the statement, 59.5% and 18.9% disagreed while 18.9% of the respondents were uncertain about the statement. The stated mean score of 2.08 and standard deviation of 0.795 indicate that most of the respondents were disagreeing with the statement. The findings mean that learning supervision does not demonstrate checking of students' notes, class exercises examination and marking schemes, improves students' commitment to learn as often reflected in better academic performance in science subjects.

When asked whether supervision activities such as classroom visits, interactive and collaborative professional trust between school supervisors and teaching staff members, regular supervision contribute to teachers' commitment towards achieving better academic performance in science subjects, findings presented in the table above reveal that 24.3% and 5.4% of the respondents were agreeing with the statement, 35.1% and 10.8% were disagreeing while 24.3% were uncertain about the statement. The findings are supported by a mean score of 2.78 and standard deviation of 1.109 indicate that supervision activities such as classroom visits, interactive and collaborative are required to professional trust between school supervisors and teaching staff members, regular supervision contribute to teachers' commitment towards achieving better academic performance in science subjects. A focused group discussion indicated that;

We often observe that the teachers' work is always supervised by the head teachers and to us we feel more comfortable because we feel they are giving us what we deserve and what is good for us.

Concerning whether support supervision improves teachers' commitment to teach, which has been found vital in enhancing the pedagogical competences of teachers to perform and realize better academic outcomes in science subjects, findings presented in the above reveal that 40.5% and 5.4% of the respondents agreed with the statement, 27.0% and 5.4% disagreed while 21.6% of the respondents were uncertain about the statement. The mean score of 3.14 and standard deviation of 1.058 showed that support supervision improves teachers' commitment to teach, which has been found vital in enhancing the pedagogical competences of teachers to perform and realize better academic outcomes in science subjects.

On whether support supervision improves schools and students' achievements in science subjects by helping teachers to deliver (adequately) in their role performance on learning progress and school development., findings presented in the table above reveal that 54.1% of the respondents agreed with the statement, 24.3% and 13.5% of the respondents disagreed with the statement while 8.1% of the respondents were uncertain about the statement. The mean score of 3.03 and standard deviation of 1.166 revealed that support supervision improves schools and students' achievements in science subjects by helping teachers to deliver (adequately) in their role performance on learning progress and school development.

Regarding whether support supervision improves the quality of teachers and teaching, which has direct influence (positive) to students' performance in science subjects, findings

presented in the table above 62.2% and 27.0% agreed with the statement, 8.1% were uncertain about the statement while 2.7% of the respondents were disagreeing with the statement. The stated mean score of 4.14 and standard deviation 0.673 revealed that support supervision improves the quality of teachers and teaching, which has direct influence (positive) to students' performance in science subjects.

Table 4.13: Multiple Model Findings

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.756 ^a	.572	.533	.47890	.572	14.715	3	33	.000

a. Predictors: (Constant), Strategies for Strengthening, Forms and Status, Challenges of Implementation

Source: Field Data (2024)

Table 4.13 above indicates reveals a model summary for the multiple regressions on various specific objectives of the study. The findings show that the three specific objectives that include forms and status of support supervision, challenges in implementing support supervision and strategies for strengthening support supervision predict students' academic achievement in Kween District by 57.2% as reflected by the R Square whereas the remaining 42.8% is predicted by other factors different from those mentioned. The results further show that there is a strong positive and significant relationship between support supervision and students' achievement in science subjects in Kween District as depicted by the study variable of $R=0.756$. Therefore, that is the influence that support supervision has on students' academic achievement in Kween districts.

Table 4.14 Regression Coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.449	.464		.967	.341
Forms and status	.276	.176	.263	1.569	.026
Challenges of implementation	.119	.199	.128	.600	.553
Strategies for strengthening	.630	.142	.715	4.445	.000

a. Dependent Variable: Students Achievement in Science Subjects

Source: Field Data (2024)

The table 4.14 above shows the coefficients of determination in regard to the study variables. It therefore provides the extent to which the independent variables predict the dependent variables.

Therefore, the study findings from table 4.14 above reveal that strategies for strengthening implementation of support supervision are the greatest predictor of students' achievement in Kween District as indicated by beta value = 0.715 at 0.004 level of significance. This implies that strategies for strengthening implementation of support supervision have a positive and significant influence on students' achievement in science subjects. Therefore, management of schools should further strengthen the implementation of support supervision in the district so as to realize improved students' achievement in science subjects.

Furthermore, the study findings from table 4.14 above reveals that forms and status of supervisor support are the second greatest predictor of students' achievement in science subjects among the study variables in reference to Kween District with beta values = 0.263 at 0.026 level of significance. This means that forms and status of supervisor support have a positive and significant effect on students' achievement in science subjects.

Finally, findings from table 4.14 above indicate challenges in implementing support supervision are the least predictor of students' achievement in science subjects in reference to

Kween District with beta values = 0.128 at 0.553 level of significance. This means that challenges in implementing support supervision have a positive but a very weak influence on students' achievement in science subjects in Kween District.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter covered the summary of findings, conclusions and recommendations regarding the influence of support supervision on student's achievement in science subjects in Kween District. This is structured and presented in line with the study specific objectives.

5.1 Summary of Findings

This section presents the summary of findings as per the stated specific objectives of the study

5.1.1 Forms and Status of Support Supervision and Students' Achievements in Science Subjects

The study findings revealed that various forms and status of support supervision predict students' academic achievement in science subjects in Kween District by 20.9% as indicated by the R Square value while the remaining percent of 79.1% is predicted by other factors other than the forms and status. The study further revealed that there is a positive and significant correlation between various forms and status of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.457$.

5.1.2 Challenges Affecting the Implementation of Support Supervision on Students' Achievement

The study revealed that challenges associated with implementation of support supervision predict students' academic achievement in science subjects in Kween District by 31% as indicated by the R Square value while the remaining percent of 69% is predicted by other factors other than the challenges of implementation of support supervision. The table also reveals that there is a moderate positive and significant correlation between challenges of implementation of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.556$.

5.1.3 Strategies for strengthening the implementation of support supervision on the Students' Achievement in Science Subjects

The findings revealed that strategies for strengthening the implementation of support supervision predict students' academic achievement in science subjects in Kween District by 53.5% as indicated by the R Square value while the remaining percent of 46.5% is predicted by other factors other than strategies for strengthening the implementation of support supervision. The table also reveals that there is a strong positive and significant correlation between strategies for strengthening the implementation of support supervision and academic achievement in science subjects in the district as reflected by the study variable of $R=0.732$.

5.2 Conclusion

The study made the following conclusions;

5.2.1 Forms and Status of Support Supervision and Students' Achievements in Science Subjects

In line with this objective, the researcher concludes that forms and status of support supervision play a significant role on influencing students' achievement in science subjects and thus implying that when the various forms and status of support supervision is emphasized, students' achievement in science subjects is enhanced in the district. The researcher further concludes that education supervision relates to overseeing function school by offering advisory and consultancy services in the areas of subject specialization and giving guidance which helps to improve teachers' performance.

5.2.2 Challenges Affecting the Implementation of Support Supervision on Students' Achievement

The researcher concludes that addressing the key challenges that affect implementation of support supervision significantly contributes towards ensuring improved students' achievement in science subjects. This implies that whenever appropriate measures are taken to deal with challenges that hinder proper support supervision, then support supervision process will be smooth. The research also concludes that learning institutions in Uganda faces the challenge of the low levels of academic performance in core science subjects (stemming from gaps administration and learning supervision). The poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time.

5.2.3 Strategies for Strengthening the Implementation of Support Supervision on the Students' Achievement in Science Subject

The study concludes that adopting proper strategies to strengthen the implementation of support supervision significantly influences students' academic achievement in science subjects. This also implies that when emphasis is put towards ensuring proper strategies are put in place, students' achievement is enhanced. The study also concludes that building the capacity of supervisors on their roles would enable them perform professionally and effectively on the achievement of set goals.

5.3 Recommendations

The study made the following recommendations;

The school management should put more emphasis towards ensuring that the different forms of support supervision are emphasized as these forms shall help ensure routine supervision support.

The school management should put more emphasis on ensuring that timely measures are put in place to address the challenges that hinder smooth support supervision within the schools as this shall help in ensuring that teachers work efficiently to assist the learners achieve their academic targets.

There is need to further ensure that the existing strategies are strengthened so as to attain smooth support supervision.

5.4 Areas for Further Research

The further studies should explore how the availability of the study materials and requirements, can enhance the performance of the science subjects in secondary schools' nationwide.

There is also need to conduct a comparative study to ascertain whether the performance in humanity subjects is better and why, as a basis to strengthen the teacher support supervision policies.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR DIRECTOR OF STUDIES AND SCIENCE TEACHERS'

Dear Participant,

I am **Kwaga Godia**, a student of Uganda Martyr's University. As a partial fulfillment for this award, I am required to carry out research. Accordingly, I am carrying out research on the topic: **"Effectiveness of Support Supervision on Students' Achievement in Science Subjects in Selected Government Aided Secondary Schools in Kween District"** You have been selected to take part in this study. Please feel free to provide the necessary information as sincerely as possible. The information that shall be given is only for academic purposes. Your name or identification will not appear anywhere on this form unless with informed consent. This is to make sure that the answers given are not associated with you.

Thank you very much for accepting to be part of this study.

Yours sincerely,

.....

Kwaga Godia

RESEARCHER.

SECTION A: DEMOGRAPHIC INFORMATION

For each of the following items, please put a tick (✓) beside the choice that best describes you.

1. Sex: (i) Male (ii) Female

2. Age: (i) 24-30yrs (ii) 31-35yrs (iii) 36-40yrs (iv) More than
40yrs

3. Marital status: (i) Married (ii) Single

3. Level of education: (i) Diploma (ii) Bachelor's degree (iii) Master's
Degree

4. Religious affiliation: (i) Catholic ii) Protestant (iii) Muslim

5. Total number of years as head of department:

(i) 1-3yrs (ii) 4yrs-10yrs (iii) 11-15yrs iv) More than 15yrs

6. How long have you worked at this station?

(i) 1-3yrs (ii) 4yrs-10yrs (iii) 11-15yrs (iv) more than 15yrs

NOTE: Please tick (√) the option box that best describes your agreement with the statement

that follow:

1. I always provide supervision facilities to help teachers in the department carry out their duties.

Yes: No:

2. I delegate to a departmental teacher to supervise other teachers.

Sometimes: Never:

Section B: Forms and Status of support supervision on Students' Academic Achievement

in Science Subjects

NB: Tick in the right box your opinion on the question statement made (where

SD=Strongly Disagree, D=Disagree, U=Uncertain, A=Agree, SA=Strongly

Agree)

S/N	Question statement	SD	D	U	A	SA
1	Education supervision relates to overseeing function school by offering advisory and consultancy services in the areas of subject specialization and giving guidance which helps to improve teachers' performance.					

2	Support Supervision is assistance or guidance accorded by a leader to a classroom teacher to enable him/her performs his or her teaching role effectively. It involves classroom observation, group development and teacher professional development activities.					
3	Supervision involves evaluating education activities to further find a follow-up to the problems faced in ensuring better academic performance and quality education as a whole.					
4	Instructional supervision is required in education to ensure uniformity and effectiveness of educational programs to promote teaching and learning.					
5	Performance is any activity outcome (usually measured by the level of efficiency and effectiveness or quality and quantity); where academically can be poor, good or excellent.					
6	Teacher performance is the extent to which teachers in a school achieve the requirements of their assign responsibilities in an effort to fulfill school-required goals and objectives.					
7	Teachers' supervisory roles include development of good instructional documents, effective lesson delivery, regular assessment of students, regular and punctual school and class attendance, effective use of instructional time, and exhibiting good working relations.					
8	Others (specify)					

Section C: Challenges facing the Implementation of Support Supervision and students' Academic Achievement in Science Subjects

NB: Tick in the right box your opinion on the question statement made (SD=Strongly Disagree, D=Disagree, U=Uncertain, A=Agree, SA=Strongly Agree)

S/N	Question statement	SD	D	U	A	SA
1	Learning institutions in Uganda faces the challenge of the low levels of academic performance in core science subjects (stemming from gaps administration and learning supervision)					

2	School leadership incapacitation and scarcity of well-trained learning supervisors is one of the factors for the prevailing poor academic performance in secondary school levels					
3	Supervisors' incapacitations to provide democratic/professional supervision have been proven to affect (negatively) the students' academic outcomes due to school administration and supervision gaps.					
4	The low level of empowerment provided to school supervisors is greatly weakening their professional supervision roles on effective service delivery towards better academic outcomes.					
5	Teachers' poor response to teaching roles and responsibilities is negatively affecting academic performance due to the non-completion of syllabus and classroom assessment.					
6	The poor performance in science subjects has often been attributed to factors such as teachers' inadequate pedagogical knowledge and skills, application of inappropriate approaches of instruction and poor use of instructional time					
7	Teachers' performance to deliver teaching services are characterized by absenteeism, lateness and poor use of instructional time which has negative impacts on academic performance					
8	The increasing level of teachers' absenteeism in class/school does not only contribute to poor students' but also wasteful spending of government resources.					
	Many secondary school institutions in Uganda (especially in the rural school settings) are not sufficiently endowed with ICT equipment which is demanded for improving science subjects' performances					
9	Others (specify)					

Section D: Strategies for Strengthening the Implementation of Support Supervision on the Students' Achievement in Science Subject.

NB: Tick in the right box your opinion on the question statement made (where SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree, and UC=Uncertain)

S/N	Question statement	AS	A	UC	D	SD
1	Building the capacity of supervisors on their roles would enable them perform professionally and effectively on the achievement of set goals.					
2	Instructional supervision should be conducted in such a way that it provides a vehicle and a structure which allows schools, departments and individuals to effectively respond to curriculum and instruction					
3	There is need for head teachers to regularly visit the classrooms and observe lessons for the purpose of motivating teachers to work towards improving students' performance.					
4	Quality of teaching highly depends upon teachers' knowledge and the level of support offered (support supervision); which calls for schools to intensify supervision so as to support teachers to perform highly in the classrooms.					
5	Support supervision content demands collective planning where time limit is set for various tasks like time to submit schemes of work, lesson plans, records of work covered and student assessment results.					
6	Adhering to the allocated time promotes timely completion of syllabus i.e. students are not blamed for exam's failure due to incomplete syllabus coverage.					
7	Effective performance requires goal setting and clear job description because individuals who set goals are motivated to work towards them to achieve them regardless of other factors.					
8	Support supervision is one of the strategies for sustainable professional development that provide new skills useful for guiding students to make learning easier.					
9	The knowledge and competences obtained by teachers in training activities are able to provide teachers with readiness to integrate aspects of technological knowledge, pedagogy and					

	content in the learning process.					
10	Having good content knowledge, places the teacher in a better position to respond to student questions and help them to understand concepts clearly.					
11	There is need for the MoES to develop school supervision framework that creates an environment supportive to both teachers and school heads to use their collective expertise in self-appraisal of teachers, to identify gaps in teacher skills, knowledge and competencies.					
12	Supervisors should deliver feedback to teachers for the purpose of making improvement in areas of weakness.					
13	Others (specify)					

Section E: Students' Achievement in Science Subjects.

NB: Tick in the right box your opinion on the question statement made (where

SD=Strongly Disagree, D=Disagree, U=Uncertain, A=Agree, SA=Strongly Agree)

S/N	Question statement	SD	D	U	A	SA
1	Teachers' support supervision improves education outcomes through strengthening relationships within systems, identification and resolution of problems, motivating staff, and optimizing resource allocation for science subjects.					
2	Teachers' support supervision enriches and influences better education understanding, which helps to control teaching management, including teacher competency development in instilling knowledge and skills for improved academic outcomes in science subjects.					
3	Learning supervision demonstrated in checking of students' notes, class exercises examination and marking schemes, improves students' commitment to learn as often reflected in better academic performance in science subjects.					
4	Supervision activities such as classroom visits, interactive and collaborative professional trust between school					

	supervisors and teaching staff members, regular supervision contribute to teachers' commitment towards achieving better academic performance in science subjects					
5	Support supervision improves teachers' commitment to teach, which has been found vital in enhancing the pedagogical competences of teachers to perform and realize better academic outcomes in science subjects					
6	Support supervision improves schools and students' achievements in science subjects by helping teachers to deliver (adequately) in their role performance on learning progress and school development					
7	Support supervision improves the quality of teachers and teaching, which has direct influence (positive) to students' performance in science subjects.					

APPENDIX II: FOCUSED GROUP DISCUSSIONS FOR STUDENTS

Questions

- 1) Do you often see the head teacher coming to class to supervise?
- 2) How would you rate the work given to you by your teachers?
- 3) Do you think the teachers are providing enough guidance to you as a learner?
- 4) What do you think the school should be doing to promote performance in science subjects among you as pupils in this school?
- 5) What is your opinion as regards existing support given to you by teachers and how they influence your performance?

The end

Thank you for your cooperation

APPENDIX III: INTERVIEW GUIDE FOR HEAD TEACHER, DEO AND DIS

1. Do you think support supervision can improve students' achievement in science subjects in any way?
2. What are some of the activities or things involved in support supervision that can enable the students to achievement in science subjects?
3. What are some of the forms and status of support supervision intended to improve on students' achievement in science subjects?
4. What do think are the challenges faced when implementing support supervision in a bid to improve the students' achievement in science subjects.

END