

**TEACHER COLLABORATION AND TEACHER EFFECTIVENESS IN GOVERNMENT-AIDED
SECONDARY SCHOOLS IN IGANGA DISTRICT, UGANDA**

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ABSTRACT

Over the years, the Government of Uganda has invested in various interventions to enhance teacher effectiveness in public secondary schools. Despite this, teacher effectiveness in many government-aided secondary schools across the country, especially in Iganga District, remains unsatisfactory. The study examined teacher collaboration's influence on teacher effectiveness in Government-aided secondary schools in Iganga District, Uganda. The objectives included establishing the influence of frequency of collaboration on teacher effectiveness, determining the influence of format of collaboration on teacher effectiveness, and assessing the influence of focus of collaboration on teacher effectiveness. Quantitative data was collected from school teachers using questionnaires, while qualitative data was collected from school administrators and vital educational stakeholders in the district using interview guides and analyzed inferentially and thematically, respectively. It was found that frequency of collaboration was significantly associated with teacher effectiveness ($r = 0.406$; $\rho < 0.05$); format of collaboration was significantly associated with teacher effectiveness ($r = 0.335$; $\rho < 0.05$); and focus of collaboration was significantly associated with teacher effectiveness ($r = 0.19$; $\rho < 0.05$). The study concluded that teacher collaboration is influential in teacher effectiveness in government-aided secondary schools in Iganga District. To improve teacher effectiveness in government-aided secondary schools in Iganga District, the study recommends that the Ministry of Education and School Administrators in the district put in place supportive mechanisms that encourage an increase in teacher collaboration.

DECLARATION

I, Semwanga Moses, hereby declare that this is my original work, is not plagiarized, and has not been submitted to any other institution for any award.

Student Name:

Student Signature:

Date:

APPROVAL

I, Dr. Charles Muweesi, based at Uganda Christian University Mukono, approve that this research report has been subjected to necessary examination requirements.

Sign:

Date.....

DEDICATION

This dissertation is dedicated to my beloved mother, Rhoda Persis Mabuye. You are my greatest inspiration in life.

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I am highly indebted to my esteemed supervisor, Dr. Charles Muweesi, for his invaluable support throughout this academic journey. With his generous guidance and advice, I remained focused and steadfast, and I finally made it. Thanks a bunch, and may the Almighty reward you richly.

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I thank my mother, Rhoda Persis Mabuye for always encouraging me to pursue greater heights in life including undertaking this Master's degree. Thank you so much, mum. In particular, I thank my beloved wife, Nakayiwa Juliet, and my children—Christabelle, Jesse, Angel, Priscilla, and Jordan. In various ways, they made invaluable sacrifices that contributed enormously to my success in my journey. I am equally grateful to my siblings—Salome, Aggrey, Paul, and Daniel.

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LIST OF TERMS AND ACRONYMS

AU	African Union
CVI	Content Validity Index
DEO	District Education Officer
DIS	District Inspector of Schools
EAC	East African Community
MOES	Ministry of Education and Sports
NDP	National Development Plan
NBPTS	National Board for Professional Teaching Standards
NRM	National Resistance Movement
OECD	Organization for Economic Cooperation and Development
SADC	South African Development Community
UNATU	Uganda National Teachers' Union
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UPC	Uganda Peoples' Congress
UPE	Universal Primary Education
USE	Universal Secondary Education

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Teacher collaboration and teacher effectiveness are two education concepts widely debated by education policymakers and researchers because they enhance student learning and achievement outcomes and improve education quality (Hargreaves, 2021). Collaboration enables teachers to share best practices, learn from each other, and embrace effective instructional strategies, improving student learning and achievement outcomes (Voogt et al., 2018). This study was undertaken to understand how teacher collaboration influences teacher effectiveness in Government-aided secondary schools in Iganga District. The different sections in this chapter address issues related to the above research topic, including the background of the research, statement of the research problem, the purpose of the study, research objectives, hypotheses, justification, significance, scope, and conceptual framework.

1.1 Background to the Research

This section's write-up highlights the research background in four different settings: historical, theoretical, conceptual, and contextual.

1.1.1 Historical Background

Teacher collaboration and teacher effectiveness are two education concepts whose evolution can be traced back to the early 20th century (Hargreaves, 2021). During this period, an American philosopher and educational reformer, John Dewey, laid the foundation of the thinking and practice of these two education concepts when he advocated for collaborative learning as a precursor to

reflective teaching (Coulter & Mandell, 2021). In 1945, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) was formulated, further underscoring the importance of the two education concepts as avenues for promoting international cooperation and knowledge exchange among school teachers (Bergman et al., 2018). In the 1960s and 1970s, research undertaken by authorities such as Benjamin Bloom and Robert F. Mager provided further foundation for a deeper understanding of how teacher effectiveness enhances learning and achievement outcomes (Anderson, 2020). In the late 20th century, teacher collaboration and teacher effectiveness gained more impetus globally following advance of technology, which enabled virtual meetings among educators, sharing resources and experiences, as well as growth and expansion of online communities (Ratheeswari, 2018). Today, institutions like Organization for Economic Cooperation and Development (OECD) and the National Board for Professional Teaching Standards (NBPTS), are mandated to assess and support teacher collaboration and teacher effectiveness initiatives respectively particularly across the developed world (Auld et al., 2019).

In the developing world, where countries are resource constrained, efforts to develop teacher collaboration and teacher effectiveness have historically been focused on addressing associated constraints. Accordingly, institutions like UNESCO made enormous investment in teacher training and promoting teacher collaboration particularly in the 20th century (Bergman et al., 2018). In the 21st century, the World Bank has been at the forefront of funding initiatives aimed at promoting teacher collaboration and enhancing teacher effectiveness through providing necessary trainings and technologies across the developing world (Auld et al., 2019). In Africa, to a great extent, the history of the growth and development of teacher collaboration and teacher effectiveness has been

shaped by former colonial masters through establishing mission schools that provide training and practice to teachers (Bardach & Klassen, 2020). However, today, regional bodies such the African Union (AU) and other regional entities such as the East African Community (EAC) and South African Development Community (SADC) are actively involved in initiatives aimed at promoting teacher collaboration and enhancing teacher effectiveness through policy reforms and providing necessary capacity building.

In Uganda, attempts to promote teacher collaboration and enhance teacher effectiveness are rooted in the efforts by former colonial masters, who built some teacher training institutions and mission schools for teacher training and practice purposes. The post-colonial Governments of Uganda, particularly the Governments of the Uganda Peoples' Congress (UPC) and the National Resistance Movement (NRM) have played key roles in promoting teacher collaboration and enhancing teacher effectiveness through policy reforms initiated by the Ministry of Education and Sports (MOES) and teacher training instruction provided by public universities and teacher training colleges distributed across the country. Such efforts by Governments have been well complemented by international institutions such as UNESCO and teacher organizations such as the Uganda National Teachers' Union (UNATU).

Owing to the historical evolution of teacher effectiveness and its contribution to overall education quality, the concepts have been a subject of inquiry and debate among education policy makers and researchers across the globe. Researchers have analyzed teacher effectiveness, and highlighted a number of associated correlates including pedagogical approaches (Munna & Kalam, 2021); teachers' cognitive abilities (Bardach & Klassen, 2020); teacher experience (Podolsky et al.,

2019); teacher managerial skills (Silva, 2021); teacher personality (Kim et al., 2018); teacher creativity (Khodabakhshzadeh et al., 2018); and student factors (Kearney & Garfield, 2022; Yerdelen & Sungur, 2019) among others. However, in the context of Uganda, research on how teacher collaboration influences teacher effectiveness remains limited (Voogt et al., 2018), specifically in Government-aided secondary schools in Iganga District. Accordingly, there was a need to explore the linkage between teacher collaboration and teacher effectiveness using evidence from Government-aided secondary schools in Iganga District.

1.1.2 Theoretical Background

Social Learning Theory formed the foundation of the study. The theory was authored in the 1960s by a Psychologist named Albert Bandura through making observations and conducting experiments, especially the Bobo Doll experiment (Bandura & Hall, 2018). The Bobo Doll experiment's focus was understanding how observational learning and social influence affect behavior (Bandura & Hall, 2018). During the experiment, adults (researchers) verbally and physically assaulted an inflatable doll in the presence of observant preschool children. Later, the children imitated the behavior of adults and equally attacked the doll (Bandura & Hall, 2018).

The theory is based on four major assumptions. First, through hearing what others say and observing what they do, individuals can acquire new knowledge, skills, values, and behaviors (Rotter, 2021). Secondly, through paying attention, memorizing, and reflecting on what other say and do, learning can take place among individuals (Rotter, 2021). Thirdly, there a number of factors such as individuals' personality, individuals' behavior, and the environment that interact with factors considered in assumptions 1 and 2, to determine how knowledge, skills, values, and

behaviors are acquired (Rotter, 2021). Finally, individuals have the capacity to self-regulate by way of setting their own goals, monitoring progress towards achievement of their goals, and adjusting their behavior by taking into consideration the feedback they receive and engaging in self-reflection (Rotter, 2021).

This theory was deemed applicable to understanding how teacher collaboration influences teacher effectiveness in Government-aided secondary schools in Iganga District, and below is the justification. In the teaching and learning context, collaboration involves teachers coming together to achieve common goals related to teaching and learning outcomes (Muckenthaler et al., 2020). They learn from each other through sharing ideas, resources, expertise, and experiences, thereby improving their teaching practices and enhancing student learning outcomes (Muckenthaler et al., 2020).

Whenever teachers collaborate more frequently (frequency of collaboration), in more ways (format of collaboration), and for more reasons (focus of collaboration); they gain an opportunity of learning from each other because they are able to hear what others say and observe what they do (study aligns with assumption 1 of Social Learning theory); and pay attention to what others say and do, memorize it, and reflect on it (study aligns with assumption 2 of Social Learning theory). In addition, they are able to set their own goals of collaboration, monitor progress towards achievement of the goals, and make necessary adjustments to their teaching effectiveness in light of the feedback they receive from their colleagues and the self-reflection they engage in (study aligns with assumption 4 of Social Learning theory). However, the improvement in their way of teaching and impacting students' learning outcomes may be moderated by other factors such

teachers' personality and students' behavior (study aligns with assumption 3 of Social Learning theory).

On the other hand, whenever teachers collaborate less frequently (frequency of collaboration), in less ways (format of collaboration), and for less reasons (focus of collaboration); they forfeit the opportunity of learning from each other because they are unable to hear what others say and observe what they do (study aligns with assumption 1 of Social Learning theory); and pay less attention to what others say and do, fail to memorize it, and fail to reflect on it (study aligns with assumption 2 of Social Learning theory). In addition, they are unable to set their own goals of collaboration, monitor progress towards achievement of those goals, and make necessary adjustments to their teaching effectiveness in light of the feedback they receive from their colleagues and the self-reflection they engage in (study aligns with assumption 4 of Social Learning theory). Again, the failure to improve in their way of teaching and impact students' learning outcomes may be moderated by other factors such teachers' personality and students' behavior (study aligns with assumption 3 of Social Learning theory).

1.1.3 Conceptual Background

The constructs considered in this study were teacher collaboration and teacher effectiveness. Teacher collaboration refers to the practice by teachers of working together to achieve common goals related to enhancing teaching practice and student learning outcomes (Hargreaves, 2021). It is a process and practice that entails teachers sharing ideas, resources, expertise, and experiences related to a number of education aspects including developing curriculum, developing syllabi, developing lesson plans, designing learning activities, designing assessment activities, assessing

student performance, and managing classroom challenges among others (Hargreaves & O'Connor, 2018).

Teacher collaboration comprises of elements such as: frequency of collaboration, format of collaboration, and focus of collaboration (Muckenthaler et al., 2020). Frequency of collaboration is a measure of how often teachers work together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). The dimensions of teacher collaboration include: regularity, consistency, intensity, and duration of collaboration (Muckenthaler et al., 2020).

Format of collaboration refers to the different ways teachers work together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). Such ways include: peer observation, participating in Professional Learning Communities (PLCs), co-teaching, online discussion mediums, and attending workshops among others (Muckenthaler et al., 2020).

Focus of collaboration refers to the specific areas in which teachers work together or the reasons that motivate teachers to work together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). Such motivating factors include: developing syllabi, developing lesson plans, designing learning activities, designing assessment activities, analyzing student performance, and managing classroom challenges (Muckenthaler et al., 2020).

Teacher effectiveness refers to teachers' ability to positively impact student learning and achievement (Bardach & Klassen, 2020; Nagler et al., 2020). It is multi-faceted, and includes

indicators such as ability to create a safe learning environment for students (Soares & Lopes, 2020). Teachers' ability to do this encourages students to undertake a variety of classroom risks including being confident when asking questions, admitting mistakes when they are committed, and seeking for help to address such mistakes (Soares & Lopes, 2020).

The other indicator of teacher effectiveness is the ability to engage students in learning processes. Effective teachers tend to encourage active student participation in learning, leading to positive learning outcomes (Havik & Westergård, 2020). It has also been observed that effective teachers tend to possess the ability of helping students achieve academic progress (Canales & Maldonado, 2018). Effective teachers also tend to use feedback from their students and peers positively (Kim & Kim, 2020). Using student and peer feedback enables them to identify areas that need improvement in their practice and apply appropriate corrective measures (Hu et al., 2021).

The final indicator of teacher effectiveness often discussed in education literature is the ability to participate in activities that promote professional growth and development (Appova & Arbaugh, 2018). By participating in professional growth activities, teachers are able to expand their knowledge base, improve their teaching skills, reflect on their teaching practices, leading to more impactful teaching (Appova & Arbaugh, 2018).

1.1.4 Contextual Background

The vision of the Government of Uganda is to transform society from a peasant to a modern prosperous country. Human capital development through education has been identified as one of the priority strategic areas of investment that the Government of Uganda seeks to leverage in order

to realize its aspirations. This explains why policies such as Universal Primary Education (UPE) and Universal Secondary Education (USE) are central to implementation of the Government's development agenda. While UPE sought to increase access to quality primary education particularly for disadvantaged children, USE sought to extend free education to the secondary level for particularly disadvantaged children who had successfully completed primary education (Kakuba et al., 2021). To support extension of free education to the secondary level, the Government with support from development partners has over the years invested in improving existing secondary school infrastructure, including building new schools particularly in rural areas, as well as renovating classrooms, and building new classrooms and teachers' houses in existing secondary schools (Atuhurra & Kaffenberger, 2022).

According to the Third National Development Plan (NDP III) 2020/21 – 2024/25, enhancing teacher effectiveness is identified as one of the strategic investment priorities of Government for achieving goals related to improving access to quality secondary education in Uganda. Accordingly, a number of measures have been undertaken by the Government to enhance teacher effectiveness, including investing in teacher training and professional development through in-service trainings, seminars/workshops to keep teachers up-to-date with current teaching knowledge and practices; recruiting qualified teachers and deploying them in underserved areas of the country particularly in rural and hard-to-reach areas; as well as reforming the education curriculum to align the content with the needs and standards of the modern times, coupled with integrating teaching approaches that are more interactive and learner-centered (Kakuba et al., 2021).

In spite of the above, teacher effectiveness in government-aided secondary schools in Uganda and more so in Iganga District, remains largely unsatisfactory. Over the past 10 years, a considerable portion of students in government-aided secondary schools have been posting performances which are not only below average in national examinations, but also faring poorly when compared to other districts in the country (Michael & Kinuthia, 2022). In addition, poor punctuality and high absenteeism are common behavioral characteristics of teachers in such schools (Nombo et al., 2020). Worse still, their classroom management skills have been found wanting in many incidences (Namugaya et al., 2021). The phenomenon of poor teacher effectiveness needs to be addressed, short of which, it may severely compromise students' ability to achieve their learning and life goals, and render communities, and the country at large unable to realize desired development aspirations.

In the past, attempts have been made by researchers to examine the phenomenon of poor teacher effectiveness in government-aided secondary schools in Uganda. For instance, through surveys, interviews, and observations, Malunda and Atwebembeire (2018) identified instructional resources as an important predictor of teacher effectiveness. Zikanga et al. (2021) employed a qualitative approach and concluded that poor remuneration was a significant impediment to teacher job performance in public secondary schools based in Western Uganda. However, the factor of teacher collaboration and how it influences teacher effectiveness has received inadequate empirical attention especially in the context of government-aided secondary schools in Iganga District. This study sought to contribute to knowledge by examining the influence of teacher collaboration on teacher effectiveness using evidence generated from selected government-aided secondary schools in Iganga District.

1.2 Statement of the Problem

Over the years the Government of Uganda has made a number of investment interventions aimed at enhancing teacher quality and effectiveness and improving education sector outcomes. These include: offering teacher training and professional development opportunities through in-service trainings, seminars and workshops; recruiting qualified teachers and deploying them in underserved areas of the country particularly in rural and hard-to-reach areas; and reforming the education curriculum to align the content with modern needs and standards, as well as integrating teaching approaches that are more interactive and learner-centered (Kakuba et al., 2021). In spite of the above measures, teacher effectiveness in government-aided secondary schools in Iganga District remains largely unsatisfactory, characterized by consistent poor student academic performance in national examinations (Michael & Kinuthia, 2022), low levels of punctuality and high levels of absenteeism (Nombo et al., 2020), and poor classroom management (Namugaya et al., 2021). Poor teacher effectiveness, if left unattended to, may severely compromise students' ability to achieve their learning and life goals, and render communities and the country unable to realize desired development aspirations. While the teacher effectiveness in government schools in Uganda has been analyzed before (Malunda & Atwebembeire, 2018; Zikanga et al., 2021), the influence of frequency of collaboration, format of collaboration, and focus of collaboration on teacher effectiveness in the context of government-aided secondary schools in Iganga District remains unknown. There is need for a study on the influence of frequency of collaboration, format of collaboration, and focus of collaboration on teacher effectiveness in the context of government-aided secondary schools in Iganga District.

1.3 Purpose of the Research

The overriding goal of the study was to examine the influence of teacher collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District, Uganda.

1.4 Objectives of the Research

The research objectives included:

- (i) Establishing the influence of frequency of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District.
- (ii) Determining the influence of format of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District.
- (iii) Assessing the influence of focus of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District.

1.5 Research Hypotheses

The study was premised on the following research hypotheses:

- (i) Frequency of collaboration does not significantly influence teacher effectiveness in Government-aided secondary schools in Iganga District.
- (ii) Format of collaboration does not significantly influence teacher effectiveness in Government-aided secondary schools in Iganga District.
- (iii) Focus of collaboration does not significantly influence teacher effectiveness in Government-aided secondary schools in Iganga District.

1.6 Justification of the Study

Understanding how teacher collaboration influences teacher effectiveness may equip policy makers, school administrators, and teachers with knowledge that enables them to design appropriate strategies for improving teacher collaboration in Government-aided secondary schools in Iganga District and elsewhere. In addition, investigating how frequency, format, and focus of teacher collaboration influences teacher effectiveness in Government-aided secondary schools in the District, can provide a basis for designing actionable measures aimed at strengthening collaboration among teachers. This may lead to improvement in teaching practices, student performance, and overall quality of the schools. Finally, the study was deemed necessary because of the benefits it may offer to education institutions far and away from Iganga District. This is because it can be used as a reference for studying and understanding the influence of teacher collaboration on teacher effectiveness in other educational and geographical contexts.

1.7 Significance of the Study

The study offers a number of benefits to a variety of stakeholders. To policy makers, it may influence formulation of policies aimed at prioritizing and incentivizing teacher collaboration efforts, which can in turn improve teacher effectiveness and quality of education in Iganga District. In addition, school administrators may gain insights into the state of teacher collaboration and undertake appropriate measures aimed at structuring and facilitating collaborative efforts. This in turn will improve the impact of teachers and enhance education outcomes of students. Teachers may also learn from best practices and increase their understanding of how frequency of collaboration, format of collaboration, and focus of collaboration enhances their effectiveness. This may enhance teacher participation in collaboration activities, thereby enhancing their teaching knowledge and skills. Finally, research on the influence of teacher collaboration on

teacher effectiveness in Government secondary schools remains far limited especially in the context of Iganga District. Accordingly, the study may contribute to the body of knowledge on teacher collaboration and teacher effectiveness by providing evidence in the context of Government-aided secondary schools in Iganga District.

1.8 Scope of the Research

1.8.1 Content Scope

The study focused on teacher collaboration and teacher effectiveness. Specifically, the influence of frequency of collaboration, format of collaboration, and focus of collaboration on teacher effectiveness. Research on the above is limited especially in Uganda, and that is why this study was deemed necessary.

1.8.2 Geographical Scope

The study was conducted in Iganga District. This was premised on the realization that in spite of the measures taken by the Government of Uganda to enhance teacher quality, teacher effectiveness remains poor in Government-aided secondary schools in Iganga District.

1.8.3 Time Scope

The study was conducted within 12 months from August 2022 to July 2023. The time focus was informed by the fact that the research project is part of an education program that has a specific time limit set by the Uganda Christian University.

1.9 Conceptual Framework

Figure 1.1 presents a diagram that represents the influence of teacher collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District.

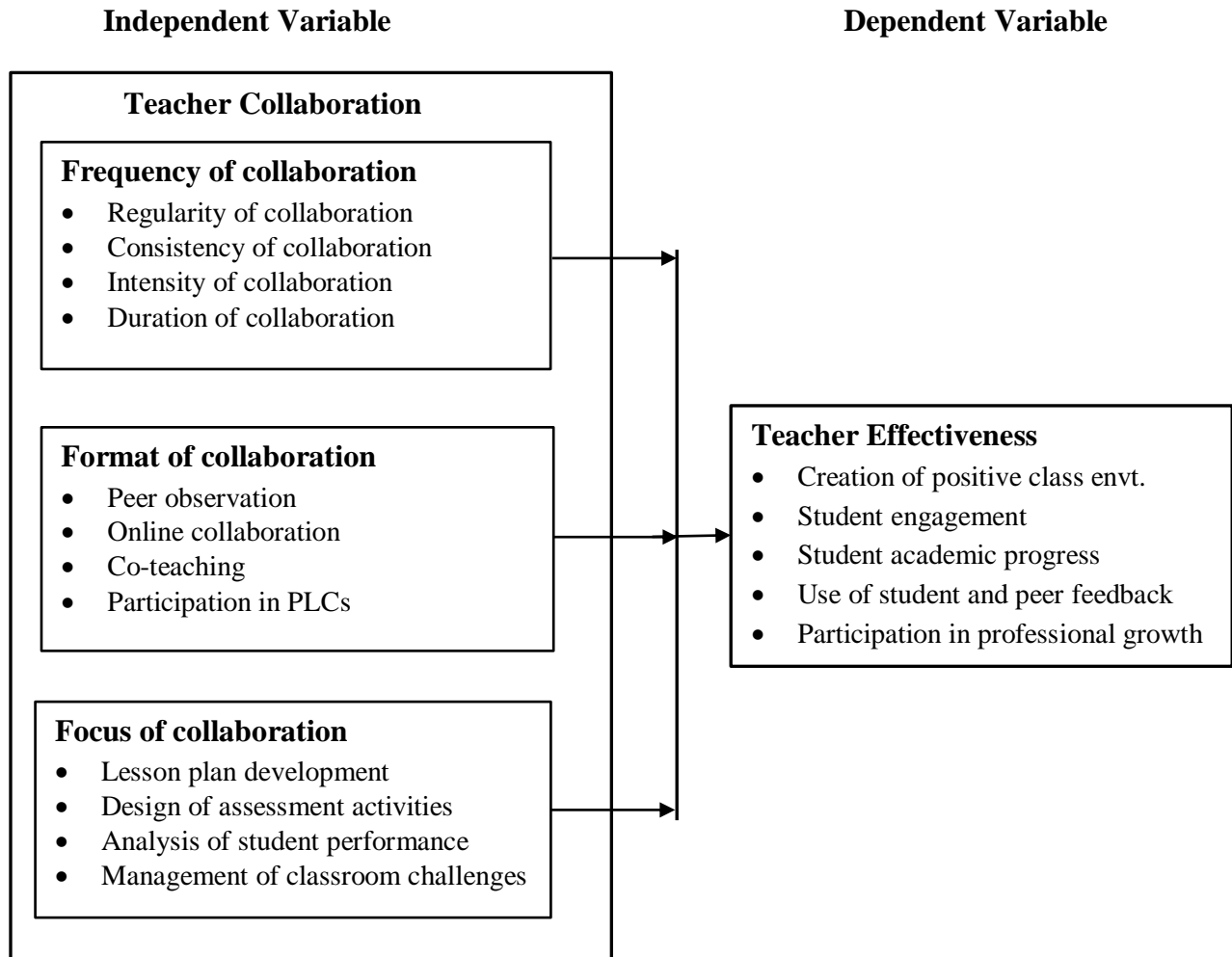


Figure 1.1: Conceptual Framework

Sources: Hargreaves & O'Connor, 2018; 2018; Muckenthaler et al., 2020; Soares & Lopes, 2020; Havik & Westergård, 2020; Canales & Maldonado, 2018; Hu et al., 2021; Appova & Arbaugh, 2018

In the figure above, teacher collaboration was considered the independent variable. Teacher collaboration consisted of three sub-variables including: frequency of collaboration, format of

collaboration, and focus of collaboration. Teacher effectiveness was the outcome variable and consisted of five indicators including: ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. From the above figure, it was presupposed that teacher collaboration had a positive influence on teacher effectiveness in Government-aided secondary schools in Iganga District. That is, when teachers collaborate more frequently, in more ways, and for more reasons; then their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities will also increase. However, when teachers collaborate less frequently, in less ways, and for less reasons; then their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities will be compromised. This presupposition was tested using data generated from teachers and other non-teacher stakeholders, and the results are presented in Chapter Four of this report.

1.10 Summary of Chapters of the Report

The consequent chapters include the chapter on literature review, in which the theoretical and empirical aspects related to the topic under study are covered. The third chapter presents the methodology used in undertaking the study. The study findings and their interpretation are covered in the fourth chapter, while the last chapter presents the discussion and conclusions of the study as well as the recommendations and areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature review related to teacher collaboration and teacher effectiveness in government-aided secondary schools in Iganga District is addressed in this chapter. Section 2.1 highlights in detail the theoretical framework upon which the study was hinged, while section 2.2 presents the empirical literature review in sub sections following the objectives of the study. The last section highlights the summary of the literature review, and under this section, lessons that were learned from literature review are highlighted as well as knowledge gaps.

2.1 Theoretical Review

The study was based on Social Learning Theory. Social Learning Theory was authored by a Canadian-American Psychologist called Albert Bandura in the early 1960s through making observations and conducting experiments, especially the Bobo Doll experiment, whose focus was studying and understanding how aggressive behavior of adults influences children (Bandura & Hall, 2018). During the experiment, adults (researchers) verbally and physically assaulted an inflatable doll in the presence of observant pre-school children, and the children later imitated the behavior of adults and attacked the doll in exactly the same way (Bandura & Hall, 2018).

The theory is based on four major assumptions. First, through observing what others do, individuals can acquire new knowledge, skills, knowledge, values, and behaviors (Rotter, 2021). Secondly, through paying attention to what others do, memorizing it, and reflecting on it, learning can take place among individuals (Rotter, 2021). Thirdly, there a number of factors such as

individuals' personalities, individuals' behaviors, and the environment that interact with others to ensure acquisition of new knowledge, skills, knowledge, values, and behaviors (Rotter, 2021). Finally, individuals have the capacity to self-regulate by way of setting their own goals, monitoring progress towards achievement of their goals, and adjusting their behavior by taking into consideration the feedback they receive, and engaging in self-reflection (Rotter, 2021).

This theory was deemed applicable to understanding how teacher collaboration influences teacher effectiveness in Government-aided secondary schools in Iganga District, and below is the justification. First, according to the theory, through observing what others do, individuals can acquire new knowledge, skills, knowledge, values, and behaviors (Rotter, 2021). One of the objectives of this study was to establish the influence of frequency of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. This objective is about establishing how often teachers collaborate, and seeking to understand whether those who collaborate more frequently are more effective than those who collaborate less frequently. This aligns with the theory's observational learning aspects.

Besides, the theory emphasizes that through paying attention to what others do, memorizing it, and reflecting on it, learning can take place among individuals (Rotter, 2021). One of the objectives of this study was to determine the influence of format of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. By pursuing this objective, the study sought to understand how the structure and collaborative activities such as peer observation, online collaboration, co-teaching, and participation in professional growth opportunities influence teacher effectiveness. This is consistent with the theory's cognitive processing aspects.

Finally, the theory assumes that individuals have the capacity to self-regulate by way of setting their own goals, monitoring progress towards achievement of their goals, and adjusting their behavior by taking into consideration the feedback they receive from peers and students (Rotter, 2021). The last objective of this study was to assess the influence of focus of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. By pursuing this objective, interest was in understanding whether teachers who actively participate in collaborative activities, exhibit greater self-regulation by way of setting their own goals of collaboration, monitoring progress towards achievement of their collaboration goals, and adjusting their collaborative behavior by taking into consideration the feedback they receive from their peers and students.

2.2 Influence of Frequency of Teacher Collaboration on Teacher Effectiveness

As indicated earlier, frequency of collaboration has been defined as a measure of how often teachers work together to achieve common goals related to enhancing teaching practice and student learning outcomes (Muckenthaler et al., 2020). Frequency of teacher collaboration is a multi-faceted concept comprising of aspects related to regularity, consistency, intensity, and duration of teacher collaboration (Muckenthaler et al., 2020).

2.2.1 Regularity of Collaboration

Regularity of collaboration is about the number of times teachers work together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). The value of having teachers work together more regularly cannot be over-emphasized. The higher the number of times teachers work together to achieve common goals related to enhancing teaching

and learning, the more such a practice becomes a part and parcel of the school culture, and the higher the likelihood of improving the quality of teacher instruction (Carroll et al., 2021). In addition, the higher the number of times teachers work together to achieve common goals related to enhancing teaching and learning, the more they stay current with teaching trends and practices, and this enhances their ability to positively impact the learning and achievement outcomes of students (Lefstein et al., 2020).

While researchers have explored the concept of teacher collaboration and its influence on teacher effectiveness, the specific focus on regularity of collaboration and how it influences teacher effectiveness is very limited. Uchuk and Dembele (2020) conducted a study in Nigeria where they aimed to study the nature of teacher collaboration, and to determine its effect on teacher instructional quality and student achievement outcomes. Their study was based on a case study design in which they relied on qualitative data generated from conducting interviews with school administrators, conducting focus group discussions with teachers, and conducting classroom observations. They found that teachers who engage in regular collaborative efforts gained confidence in their teaching abilities and inspired students to perform well academically. However, the shortcoming of this study was that it was based on a single qualitative case study, which means its generalizability value to other contexts. This current study adopted a mixed approach combining both quantitative and qualitative approaches because it offers a comprehensive understanding of issues under study and enhances application of its findings.

2.2.2 Consistence of Collaboration

Consistency of teacher collaboration is about ensuring that the practice of teachers working together to achieve common goals related to enhancing teaching and learning is an enduring act over time (Muckenthaler et al., 2020). When the practice of teachers working together to achieve common goals related to enhancing teaching and learning becomes an enduring act over time, it builds trust among teachers, and it becomes easier for them to rely on support of one another to enhance their professional growth (Voogt et al., 2018). In addition, it ensures that the practice of teachers working together to achieve common goals related to enhancing teaching and learning does not occur randomly, but is part and parcel of the school's planning and operational activities (Voogt et al., 2018).

2.2.3 Intensity of Collaboration

Intensity of teacher collaboration is about ensuring that the practice of teachers working together to achieve common goals related to enhancing teaching and learning is an act that goes beyond casual exchanges and involves deeper interactions (Muckenthaler et al., 2020). It is a measure of how serious teachers think it is important to work together to achieve common goals related to enhancing teaching and learning. Intensity of teacher collaboration is important because it enables teachers to share their knowledge and expertise on teaching practices, and this can lead to acquisition of superior teaching methods and instructional strategies, which ultimately enhances their effectiveness or ability to positively impact the learning and achievement outcomes of students (Lefstein et al., 2020).

2.2.4 Duration of Collaboration

Duration of teacher collaboration is about the amount of time invested by teachers on working together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). Investing more time in working together to achieve common goals related to enhancing teaching and learning, implies that teachers have sufficient time to explore multiple solutions to complicated challenges they identify in regard to teaching and learning, thereby enabling them to select and adopt the most effective options that enhance their ability to positively impact the learning and achievement outcomes of students (De-Jong et al., 2019).

2.3 Influence of Format of Teacher Collaboration on Teacher Effectiveness

Format of collaboration refers to the different ways teachers work together to achieve common goals related to enhancing teaching practice and student learning outcomes (Muckenthaler et al., 2020). There are different ways in which teachers can work together to achieve common goals related to enhancing teaching and learning, but this study was confined to ways that are dominantly highlighted in literature including peer observation, participating in professional learning communities, co-teaching, online discussion mediums, and attending workshops among others (Muckenthaler et al., 2020).

2.3.1 Peer Observation

In the context of teacher collaboration, peer observation is a practice that involves teachers observing the teaching methods and practices of their colleagues while in the classroom (Fletcher, 2018). It entails teachers observing their colleagues teaching in the classroom, taking notes and gathering information on different aspects of teaching, engaging in a feedback sessions in which

they share observations, providing constructive feedback, and discussing areas of strength as well as areas for improvement (Durmuş, 2020). This entire process of peer observation is supposed to be done in a collegial and supportive manner (Durmuş, 2020).

The fundamental reason why teachers engage in observing their colleagues while teaching in class is to promote professional development among teachers (Durmuş, 2020). Peer observation and teacher effectiveness have an intricate connection. Peer observation enhances teacher effectiveness through promoting professional growth and development among teachers (Fletcher, 2018). Through peer observation, teachers are able to reflect on their own teaching practices, receive advice from their colleagues regarding their teaching practices, and make informed decisions on how to refine their teaching strategies and techniques, which enhances their teaching practices and learning outcomes of students (Fletcher, 2018).

2.3.2 Professional Learning Communities

The other way that teachers can engage in collaboration or working together to achieve common goals related to enhancing teaching and learning is through gaining membership in Professional Learning Communities (PLCs) (Muckenthaler et al., 2020). PLCs are groups of educators (teachers) who come together, set common and specific goals, and decide to work together to achieve those common goals (Schaap & de Bruijn, 2018). PLCs are usually formed within schools and their overriding goals tend to focus on improving teaching practices, improving students' learning outcomes, and fostering a culture of continuous learning among teachers (Schaap & de Bruijn, 2018).

There exists a link between PLCs and teacher effectiveness. Effective PLCs are the kind in which members tend to collaborate regularly to share their knowledge, expertise, and experience related to their own teaching methods and practices (Prenger et al., 2019). Through engaging in deeper discussions, they reflect on their own teaching methods and approaches, and identifying appropriate teaching interventions (Prenger et al., 2019). The distinguishing attribute of PLCs is that teachers collaborate or work together to identify and implement teaching strategies and interventions that positively impact learning by students (Schaap & de Bruijn, 2018).

2.3.3 Co-teaching

Co-teaching is other way recognized in literature through which teacher can engage in collaboration or working together to achieve common goals related to enhancing teaching and learning (Muckenthaler et al., 2020). The collaborative practice of co-teaching entails two or more teachers choosing to share or work together in the same classroom environment to plan for the teaching of students, implement the teaching for the benefit of students, and assess the impact of what is taught on the performance of the students (Beninghof, 2020). There are a number of different ways of conducting co-teaching including: one teacher taking the lead while the other provides support; both teachers could choose to take the lead, but in different phases of the lesson; or the class could be divided into groups and then each teacher handles a group (Beninghof, 2020). It has been argued through research that co-teaching can enhance teacher effectiveness. According to Strogilos and King-Sears (2019), with the co-teaching method, teachers are able to explore diverse knowledge and skills to plan, deliver, and assess instruction practices, which leads to effective handling of the diverse learning needs of the students.

2.4 Influence of Focus of Teacher Collaboration on Teacher Effectiveness

Focus of collaboration refers to the specific areas in which teachers work together to achieve common goals related to enhancing their teaching practice and student learning outcomes (Muckenthaler et al., 2020). There are a number areas in which teachers may work together to achieve common goals related to enhancing their teaching and learning, but this study on those which are dominantly cited in literature including areas such as developing lesson plans, designing learning and assessment activities, analyzing student performance, and managing classroom challenges (Muckenthaler et al., 2020).

2.4.1 Lesson Plan Development

Lesson planning is an important endeavor of the teaching and learning process. Effective lesson planning articulates clear learning objectives and content to be covered, and this ensures that both teachers and students clearly understand what will be covered during the teaching and learning process (Milkova, 2012). In addition, effective lesson planning enables teachers to align their instructional strategies with their teaching objectives, and this fosters positive learning outcomes for the students (Baylor et al., 2021). When lessons are well planned, it maximizes the chances of teacher delivering quality instruction, and students enjoying their learning experiences, which in turn improves a number of educational outcomes (Milkova, 2012).

Teacher collaboration is important in the context of developing effective lesson plans, and it has a bearing on teacher effectiveness. Whenever teachers decide to collaborate among themselves, it creates a pool of teaching knowledge, skills, and experiences, which when harnessed, may lead to the development of richer lesson plans that serve the diverse teaching and learning needs of

teachers and students respectively (Cevikbas et al., 2023). Also, when teachers decide to collaborate for the purpose of designing lesson plans, it creates an opportunity of learning from one another, sharing best practices, and staying updated on current trends in teaching and learning (Backfisch et al., 2020).

2.4.2 Design of Learning and Assessment Activities

Learning and assessment are essential components of effective teaching. For this reason, it is important that teachers possess knowledge and skills in designing effective learning and assessment activities. This is especially so because effective learning activities engage students actively in the learning process (Wiliam & Thompson, 2017). They contribute to the development of students' cognitive abilities through enhancing their ability to analyze, synthesize, apply, and evaluate information, which promotes in-depth understanding of teaching content (Wiliam & Thompson, 2017). In addition, effective assessment activities are a mechanism through which both students and teachers can receive feedback. Teachers can use assessments to evaluate their instructional strategies, and make appropriate adjustments aimed at improving teaching processes (Wiliam & Thompson, 2017). Similarly, students can use assessments to identify areas they need to improve in order to perform better in subsequent assessments (Wiliam & Thompson, 2017).

Collaboration in designing learning and assessment activities is important since it has a bearing on enhancing teacher effectiveness and education outcomes. Teacher collaboration in the processes of designing learning and assessment activities brings together teachers with diverse knowledge, experience, expertise, and perspectives in this particular area (Wanner & Palmer, 2015). Furthermore, the author argued that when such resources are well harnessed, it leads to the

development of learning and assessment activities that serve the broader and diverse needs of students. Also, collaboration among teachers in the context of learning and assessment, leads to development of quality learning and assessment activities since teachers are in position to critically review the proposed learning and assessment activities, and make appropriate adjustments where necessary (Wanner & Palmer, 2015).

2.4.3 Analyzing Student Performance

Effective teaching entails that students must be subjected to some form of assessment. This is because of the benefits that assessment offers to both students and teachers. Through assessment, schools can ascertain whether students' have made progress in acquiring necessary knowledge, skills and competencies (Suskie, 2018). In addition, subjecting students to assessment helps identify areas where they need improvement, and designing appropriate improvement interventions (Suskie, 2018). Assessing students is a straight forward way for enabling teachers to evaluate the efficacy of their teaching strategies and methods, and make adjustments where necessary both for their own good and that of the students (Suskie, 2018). This and many other reasons not highlighted herein, underscore the importance of assessment as an attribute of an effective education system.

It is important for teachers to possess sufficient knowledge and skills in analyzing student performance since it has a bearing on their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. When teachers collaborate in analyzing student academic performance, they gain more complete

understanding of students' strength, students' weaknesses, and students' learning needs (Jackson, 2018). In addition, when teachers collaborate in analyzing students' academic performance, they are able to gain a more accurate and less biased construction of the students' performance, which enables them to design appropriate performance improvement interventions (Jackson, 2018).

2.5 Literature Review Summary

The literature presented in this chapter underscores the importance of teacher collaboration as an influential factor of teacher effectiveness in government-aided secondary schools in Iganga District. It specifically focusses on how frequency, format, and focus of collaboration influence teacher effectiveness. The study was premised on Social Learning Theory, which highlights how the teacher collaboration aspects of frequency of collaboration, format of collaboration, and focus of collaboration align with the theory's aspects of observational learning, cognitive processing, and self-regulation. While literature reviewed shows that teacher collaboration has a bearing on teacher effectiveness, knowledge gaps still exist showing that the linkage between these two education constructs has not been adequately explored especially in the context of government-aided secondary schools in Iganga District in Uganda. This study was motivated by the need to contribute to filling this knowledge gap using evidence from government-aided secondary schools in Iganga District in Uganda.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

A number of methods and procedures were followed in conducting this study. These are explained in the following sections: research design, area of study, sources of information, population and sampling techniques, variable definition and measurement, procedures for data collection, data collection instruments, quality control, data processing and analysis, ethical considerations, and methodological constraints.

3.1 Research Design

A cross-sectional design was employed in studying teacher collaboration and its influence on teacher effectiveness in Government-aided secondary schools in Iganga District. A cross-sectional design is a method of conducting research through collecting data from various respondents at a given point in time (Bryman, 2016). In this case, data was collected on various issues related to teacher collaboration and teacher effectiveness from a diverse group of respondents within one month. This design was chosen because, compared to other research designs such as longitudinal design, it can generate more data on a wide range of issues using less resources and limited time (Cummings, 2018). In addition, a cross sectional research design was adopted because cross sectional data is often considered appropriate by researchers in testing research hypotheses, and testing hypotheses was part and parcel of the current study (Cummings, 2018). In addition, the selected research design was executed using a combination of quantitative and qualitative approaches when it came to collecting and analyzing data. A mixed approach was used as opposed to a single approach because the former minimizes the risk of bias and it enables researchers to

cross-validate their findings, which enhances the validity and reliability of research findings (Timans et al., 2019).

3.2 Area of Study

The study was conducted in Iganga District. Iganga District is one of the eleven districts located in Busoga sub region, which is found in the eastern part of the country. The district is bordered by a number of other districts, including Jinja District which is located to the west, Namutumba District which is located to the northeast, Bugiri District which is located to the southeast, and Mayuge District which is located to the north. The district boasts of nine Government-aided secondary schools; however, emphasis was on 5 Government-aided secondary schools. To uphold the ethical principle of anonymity, the names of the schools of the schools that participated in the study were removed from the report and replaced with pseudo such as School V, School W, School X, School Y, and School Z. The choice of the schools was premised on the need to ensure that they were spread across the geographical landscape of Iganga District for the purpose of achieving geographical diversity in the sample.

3.3 Sources of Information

The study relied on information generated from primary as well as secondary sources. Primary sources of data included surveys conducted using questionnaires, and interviews conducted using interview guides. On the other hand, secondary sources of information included relevant textbooks, peer-reviewed journal articles, Government publications, and internal records attributed to the selected secondary schools.

3.4 Population and Sampling Techniques

3.4.1 Study Population

The target population involved: school teachers in the selected schools (220 in number), Head teachers of the selected schools (5 in number), Deputy Head teachers of the selected schools (10 in number), Director of Studies of the selected schools (5 in number), District Inspector of Schools (1 person), District Education Officer (1 person), and representatives of UNATU at the District (2 in number).

3.4.2 Sample Size and Sampling Techniques

The study targeted 140 teachers for participation in the research. This sample was calculated using the Morgan and Krejcie (1970) table, which is used in determining the appropriate sample size for a given population size. According to that table (Appendix 1), for a population size of 220, the corresponding sample size is 140. Since the number of teachers in the selected schools varies, the sample subjects were chosen using the method of proportionate stratified random sampling. The method entailed grouping the teachers into five groups based on their designated schools, and then choosing a random sample of teachers from each school, which is proportionate to the size of the entire population of school teachers as guided by Bhardwaj (2019). This method was selected because it ensures that all participants in the identified sub-groups in a given population have an equal chance of being included in the sample. In addition, 5 Head teachers, 10 Deputy Head teachers, 5 Directors of Studies from the selected schools, the District Inspector of Schools, the District Education Officer, and two District UNATU officials were considered in the sample. These were chosen using the method of purposive sampling. The method entailed selecting specific

individuals whom the researcher, in his own subjective judgment, considered to possess expertise and unique knowledge about issues under investigation (Bhardwaj, 2019).

3.5 Variable Definition and Measurement

The variables considered in the study were teacher collaboration and teacher effectiveness. In the context of this study, teacher collaboration was defined as the practice by teachers of working together through sharing ideas, resources, expertise, and experiences to achieve common goals related to teaching and learning. Teacher collaboration was further broken down into three major sub-constructs including: frequency of collaboration, format of collaboration, and focus of collaboration.

Frequency of collaboration is about regularity, consistency, intensity, and duration of collaboration of teachers of working together (Muckenthaler et al., 2020). To assess the extent of regularity, consistency, intensity, and duration of collaboration among teachers, a total of 8 likert-scaled items were developed, and each of these items had five answer options from which respondents had to select their preferred response option. The response options ranged from 1=strongly disagree to 5=strongly agree.

Format of collaboration refers to the different ways teachers work together to achieve common goals related to teaching practice and student learning outcomes, including peer observation, participating in professional learning communities, co-teaching, and online discussion mediums (Muckenthaler et al., 2020). To assess the different ways teachers collaborate, a total of 8 likert-scaled items were developed, and each of these items had five answer options from which

respondents had to select their preferred response option. The answer options ranged from 1=strongly disagree to 5=strongly agree.

Focus of collaboration refers to the specific purpose for which teachers work together to achieve common goals related to teaching practice and student learning outcomes, including syllabus development, developing lesson plans, designing learning activities, designing assessment activities, analyzing student performance, and managing classroom challenges (Muckenthaler et al., 2020). To assess the different purposes for which teachers collaborate, a total of 8 likert-scaled items were developed, and each of these items had five answer options from which respondents had to select their preferred option ranging from 1=strongly disagree to 5=strongly agree.

Teacher effectiveness refers to the ability of a teacher to positively impact the learning and achievement outcomes of students through creating a safe learning environment for students, to engaging students in learning processes, helping students to progress academically, using feedback from their students, participating in activities aimed at their professional growth and development and peers positively (Bardach & Klassen, 2020; Nagler et al., 2020). To assess the ability of a teacher to positively impact the learning and achievement outcomes of students, a total of 10 likert-scaled items were developed, and each of these items had five answer options from which respondents had to select their preferred option ranging from 1=strongly disagree to 5=strongly agree.

3.6 Procedures for Data Collection

The data collection instruments were submitted to the supervisor for approval, and thereafter, they were sent to the Research Ethics Committee of Uganda Christian University Mukono for review. After obtaining clearance to proceed with the research from the committee, the instruments were then subjected to a pilot-test using a small number of respondents. The purpose was to ascertain whether the items in the questionnaire were well crafted and whether they were understandable to both the research assistants and the respondents, and through this process, all questions that were not easily understood were either re-worded or entirely expunged from the instruments. After this exercise, an introductory letter was secured from the same committee, which introduced the researcher to the selected research sites and respondents. The researcher proceeded to seek written permission from managers of the selected government-aided secondary schools in Iganga District allowing the research to access the sites and the respondents. Then two research assistants were identified, and trained about the content of the instruments as well as the administration of the instruments. Survey data was collected by the Research Assistants while interview data was collected by the Principle Researcher.

3.7 Data Collection Instruments

There were two major instruments that were used in this study, that is, a structured questionnaire and a semi-structured interview guide. The explanation of how they were used follows in the following sub-sections.

3.7.1 Structured Questionnaire

The structured questionnaire consisted of a set of questions with pre-determined questions and response options and presented in a specific order. The response items were rated of a five-point likert scale with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. A structured questionnaire was chosen since using standardized questions and responses options helps to reduce the possibility of bias and confusion in responses, and eases the work of data entry and analysis as was observed by Roopa and Rani (2012). The questionnaire was self-administered since the respondents were deemed sufficiently literate.

3.7.2 Semi-structured Interview Guide

A semi-structured interview guide was employed in the study, which consisted of a list of open and close-ended questions that were designed to elicit responses from key informants. The key informants included Head Teachers, Deputy Head Teachers, Director of Studies, the District Inspector of Schools, the District Education Officer, and District UNATU officials. These individuals were selected based on their firsthand experience, insights, and expertise in the subject matter. The choice of this instrument was informed by the fact that key informants provide a deeper understanding of complex issues or specific contexts, offering valuable perspectives that may not be accessible to the general population (Kumar, 1989). The interview guide was administered by the principle researcher to ensure consistency and probe for in-depth responses.

3.8 Quality Control

In the context of data collection, quality control is about ascertaining the validity and reliability of instruments used in data collection as explained in the sub-sections below.

3.8.1 Validity of Instruments

Instrument validity is the extent to which items in a given instrument accurately measures the concepts or variables they are intended to measure (Cohen et al., 2017). To ascertain whether the items in the questionnaires accurately measured the concepts of teacher collaboration and teacher effectiveness, the instrument was subjected to content validity. Three education experts were sought and requested to review the instruments to determine whether the items therein were relevant to teacher collaboration and teacher effectiveness. A content validity index (CVI) was developed for items representing the constructs of frequency of collaboration, format of collaboration, focus of collaboration, and teacher effectiveness, and Table 3.1 presents a summary of findings in relation to CVI corresponding to each of the study constructs.

Table 3.1: Results of Content Validity Index

Experts	Content Validity Index
Frequency of collaboration	0.894
Format of collaboration	0.885
Focus of collaboration	0.853
Teacher effectiveness	0.890

From the above table, CVI corresponding to frequency of collaboration, format of collaboration, focus of collaboration, and teacher effectiveness ranged from 0.853 to 0.894. According to Boparai et al. (2018), a CVI of 0.8 implies that the items representing a given construct accurately measure that construct. Since the realized CVI figures highlighted Table 3.1 were found to be above the threshold of 0.8, it means that the items included in the study survey instrument accurately represented the study constructs under consideration in this study.

3.8.2 Reliability of Instruments

Reliability of instruments refers to how consistent an instrument is measuring research constructs in different contexts (Cohen et al., 2017). To ascertain the reliability of the instrument used in this study, Cronbach Alpha Coefficient values for each of the items representing the study constraints were calculated, and Table 3.2 presents the average Cronbach Alpha Coefficient values for each of the items representing the study constraints.

Table 3.2: Results of Cronbach Alpha Coefficient Test

Study Construct	Number of Items	Average Cronbach Alpha Coefficient
Frequency of collaboration	8	0.785
Format of collaboration	8	0.806
Focus of collaboration	8	0.778
Teacher effectiveness	10	0.827

The results in Table 3.2, the Average Cronbach Alpha Coefficient ranged from 0.778 to 0.827. According to (Cohen et al., 2017), Cronbach Alpha Coefficient above 0.7 represent high instrument reliability. The results realized clearly demonstrated that the instrument used in the study was considered reliable.

3.9 Data Processing and Analysis

The study relied on both quantitative and qualitative data. For this reason, both quantitative and qualitative processing and analysis of data were conducted as explained in the following sub-sections.

3.9.1 Quantitative Data Processing and Analysis

Before quantitative data was analyzed, it was subjected to cleaning. This process entailed identifying and correcting any errors and inconsistencies in the data, either by removing duplicates or handling missing values. Thereafter, the data was entered into automated Excel Datasheet and prepared for data analysis. The data was subjected to descriptive and inferential analysis. The former entailed computing metrics associated with study responses such as standard deviations, means, percentages, and frequencies. The purpose of descriptive analysis was to summarize, and understand patterns and trends in the data. Inferential analysis entailed computing the Pearson's correlation coefficient, which is a statistical measure of the direction and strength of the linear relationship between variables. The Pearson's correlation coefficient values range from -1 to +1. Values that are close to +1 imply a strong positive linear relationship between variables, values close to -1 imply a strong negative linear relationship between variables, and a correlation of zero implies that there is no linear relationship between variables. The purpose of computing the Pearson's correlation coefficient was to test hypotheses highlighted in Chapter One. The quantitative analysis was executed with the aid of a statistical analysis tool known as Statistical Package for Social Scientists (SPSS).

3.9.2 Qualitative Data Processing and Analysis

Interview data was generated from Head teachers, Deputy Head teachers, Director of Studies, District Inspector of Schools, the District Education Officer, and District UNATU officials. Processing this data entailed transcribing recorded interviews, categorizing responses, and developing codes. This was followed by identifying recurring themes and sub themes within the data. The themes and sub themes were later integrated into a broader picture that describes the

influence of teacher collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District.

3.10 Ethical Considerations

For research to be considered credible, it must be premised on standard ethical guidelines and practices (Hasan et al., 2021). Accordingly, certain ethical practices were followed when conducting the current study. Prior to execution of the study, a written research proposal was submitted to the University's ethical review committee, which evaluated the ethical aspects of the study, and thereafter gave clearance to proceed with the study. After obtaining approval notice allowing the researcher to undertake the study, written permission to access the selected research sites (five Government-aided secondary schools in Iganga District) and relevant respondents (school teachers, Deputy Head Teachers, and Directors of Studies) was sought from the Head Teachers of the schools. Respondents were also provided with information regarding the purpose, objectives, benefits, and risks associated with study in order to gain their informed consent and voluntary participation. Also, to protect the privacy and confidentiality of respondents, data was anonymized by replacing all identifying information with codes and assigning unique identifiers. Respondents were also allowed to exercise their autonomy by allowing them their free right to withdraw from the study at any time without being subjected to any form of penalty. Finally, to avoid plagiarism, all sources of information used in the study were properly cited using the university's authorized citation styles and guidelines.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.0 Introduction

Presentation, analysis, and interpretation of findings in relation to teacher collaboration and teacher effectiveness in selected Government-aided secondary schools in Iganga District are covered in this chapter under different sections. The first section presents information related to response rate analysis, followed by a section on respondents' demographics. The third section presents findings related to respondents' views about teacher effectiveness, while the next three sections presents findings of the study in relation to the three research objectives of the study.

4.1 Response Rate Analysis

A total of 140 school teachers, 5 Head teachers, 10 Deputy Head teachers, 5 Director of Studies in the five selected Government-aided secondary schools were targeted for participation in the study, in addition to the District Inspector of Schools (DIS), the District Education Officer (DEO), and two District UNATU officials. Table 4.1 presents a summary of findings and analysis in relation to the targeted participants vs. the realized participants.

Table 4.1: Response Rate Analysis

Participants	Target Number	Realized Number	Response Rate
School teachers	140	122	87.1%
Head Teachers	5	4	80%
Deputy Head Teachers	10	9	90%
Directors of Studies	5	5	100%
D.I.S	1	1	100%
D.E.O	1	1	100%
UNATU Officials	2	2	100%

From Table 4.1, out of 140 teachers targeted for participation in the study, 122 of them were realized, representing a response rate 87.1%. Among Head Teachers, out of the 5 targeted for participation in the study, 4 were realized representing a response rate of 80%. Among Deputy Head Teachers, out of 10 targeted for participation I the study, 9 were realized representing a response rate of 90%. The response rate was 100% for the Directors of Studies, D.I.S, D.E.O, and UNATU officials. According to Baruch and Holtom (2018), response rates which are over and above 60% are considered good for subjecting results to further analysis. The response rates from the study were higher than the threshold stated by the authors, and were thus deemed suitable for further analysis.

4.2 Respondents' Demographic Factors

Demographic factors considered in the study included sex of respondents, highest education attainment, age bracket, and duration of employment. The presentation and analysis of these factors is indicated in Table 4.2 below.

Table 4.2: Respondents' Demographic Factors

Variable	Category	Freq (n = 122)	Percentage
Sex	Male	64	52.8
	Female	58	47.2
Highest Educ. Attainment	PhD holders	0	0
	Masters' Degree holders	13	9.8
	Bachelors' Degree holders	93	76.7
	Diploma holders	16	13.5
Age Bracket	Less than 30 years	10	8.6
	30 – 39 years	34	28.2
	40 – 49 years	53	42.3
	50 years above	25	20.9
Employment Duration	Less than 5 years	31	25.8
	5 – 14 years	55	45.4
	15 – 19 years	20	17.2
	20 years & above	16	11.6

From the above results, most respondents surveyed (52.8%) were male, which suggests a possible existence of gender imbalance among teachers in the selected government-aided secondary schools

in Iganga District, which may have implications for understanding the dynamics of gender in the teaching profession, and how such dynamics may be related to teacher collaboration and teacher effectiveness. The table also shows that most v (76.7%) were holders of bachelor's degrees, which could suggest that most teachers in government-aided secondary schools in Iganga District possess the minimum qualification for teaching, which is an important requirement for delivering quality education.

Also, the majority of respondents surveyed (42.3%) were in the age range of 40 – 49 years, which suggests that the selected government-aided secondary schools in Iganga District boast of a relatively experienced workforce, which offers benefits (years of teaching experience) and possess challenges (potential to resist change). Finally, the results in the table demonstrated that most surveyed respondents (45.4%) had been working as teachers for a period between 5 and 14 years, which suggests that most teachers in the selected government-aided secondary schools are relatively experienced, and could act a potential resource in building collaborative efforts through sharing their acquired knowledge and experience with newer teachers.

4.3 Respondents' Views on Teacher Effectiveness

Teacher effectiveness was the outcome variable in this study, and it was a common denominator among the research objectives or research hypotheses highlighted in Chapter One. It was assessed using 10 statements. Respondents were required to indicate the degree to which they agreed or disagreed with each of the 10 statements and they had five answer options from which to select ranging from strongly disagree (1) to strongly agree (5). For simplified data presentation, “Strongly agree” and “Agree” responses were combined into “Agree” responses, while “Strongly disagree”

and “Disagree” responses were combined into “Disagree” responses. Frequencies, percentages, means, and standard deviations were the descriptive statistics employed to analyze respondents’ views to the 10 statements. A summary of the analysis of the responses to items on teacher effectiveness is presented in Table 4.3.

Table 4.3: Respondents’ Views on Teacher Effectiveness

Items on teacher effectiveness	Disagree	Neutral	Agree	Mean	Std. Dev
Teachers in my school create a well-coming & inclusive classroom environment before & during teaching	68 (55.7%)	9 (7.4%)	45 (36.9%)	2.562	1.421
Teachers in my school establish clear classroom rules before & during teaching	66 (54.1%)	10 (8.2%)	46 (37.2%)	2.605	1.320
Teachers in my school use interactive & engaging methods when teaching	70 (57.4%)	7 (5.7%)	45 (36.9%)	2.790	1.296
Teachers in my school allow students to engage in free discussion about what they teach	74 (60.6%)	11 (9%)	37 (30.3%)	2.685	1.252
Teachers in my school effectively communicate learning goals to their students	72 (59.0%)	18 (14.8%)	32 (26.3%)	2.618	1.341
Teachers in my school provide timely & constructive feedback that supports learning by students	67 (54.9%)	16 (13.1%)	39 (32.0 %)	2.574	1.253
Teachers in my school are receptive to feedback from their students & use it to improve their teaching	72 (59.0%)	10 (8.2%)	40 (32.8%)	2.745	1.208
Teachers in my school seek opinions from their fellow colleagues and value the feedback they receive	67 (54.9%)	10 (8.2%)	45 (36.9%)	2.658	1.421
Teachers in my school are always seeking for opportunities to develop professionally	66 (54.4%)	10 (8.2%)	46 (37.2%)	2.704	1.321
Teachers in my school are always seeking for information about current education practices	67 (54.9%)	15 (13.1%)	30 (28.4%)	2.617	1.340

One of the dimensions of teacher effectiveness was ability to create and positive classroom environment, which was assessed using two items, “Teachers in my school create a well-coming & inclusive classroom environment before and during teaching” and “Teachers in my school establish clear classroom rules before & during teaching.” The results in Table 4.3 indicate that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), further cementing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying respondents did not differ much in terms of their opinions on the two items. These survey findings appeared to augur with the findings generated from interviews that were conducted with some of the key informants. For instance, when asked to comment about the ability of teachers in their schools to create positive learning environments for students while in class, one key informants remarked that,

Unlike before classrooms are very diverse in terms the students we have. When it comes to creating positive classroom environments, many of our teachers struggle. They need support to enhance their classroom management skills (Key Informant J).

Overall, the quantitative and qualitative findings demonstrated that teachers’ ability to create a positive classroom environment in selected government-aided secondary schools in Iganga District was generally low.

Another dimension of teacher effectiveness was ability to engage students, which was assessed using two items, “Teachers in my school use interactive & engaging methods when teaching” and “Teachers in my school allow students to engage in free discussion about what they teach.” The

results in Table 4.3 indicate that most respondents either agreed or strongly agreed with these two statement. The corresponding mean values corresponding to the two items were less than the threshold mean of agreeing with a particular item (3.5), further implying that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying there were no significant variations in respondents opinions on the two items. These survey findings were supported by findings generated from key informant interviews. For instance, when asked to comment about the ability of teachers in their schools to effectively engage students while in class, one the key informants remarked that,

Some of our teachers find it difficult to make their lessons interesting and interactive, and this affects the enthusiasm of the learners, which in turn also affects the performance of the learners. But with support, I think they can do better (Key Informant M).

Overall, the quantitative and qualitative findings demonstrated that teachers' ability to create a to effectively engage students in learning processes in selected government-aided secondary schools in Iganga District was generally low.

Helping students make academic progress was also one of the dimensions of teacher effectiveness, and it was assessed using two items, "Teachers in my school effectively communicate learning goals to their students" and "Teachers in my school provide timely & constructive feedback that supports learning by students." The results in Table 4.3 indicate that most respondents either disagreed or strongly disagreed with these two statement. The corresponding mean values were below the threshold mean of agreeing with a particular item (3.5), further reinforcing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying the variations in respondents' opinions on these items

were not big. These survey findings were consistent with the findings generated from interviews conducted with some of the key informants. For instance, when asked to comment about the ability of teachers in their schools to help students make academic progress, one key informant remarked that,

Teachers try so hard to help students achieve good academic progress, but unfortunately the results year-in-year out are never encouraging for both students and parents. (Key Informant C).

Overall, the quantitative and qualitative findings demonstrated that teachers' ability to help students make tangible academic progress in selected government-aided secondary schools in Iganga District appears wanting.

Teacher effectiveness was also measured in terms of ability to use feedback from students and peers positively, and this indicator was assessed using two items, "Teachers in my school are receptive to feedback from their students & use it to improve their teaching" and "Teachers in my school seek opinions from their fellow colleagues and value the feedback they receive." The results in Table 4.3 show that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were lower than the threshold mean of agreeing with a particular item (3.5), further cementing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying respondents did not differ much in terms of their opinions on the two items. These survey findings were in line with the findings generated from interviews that were conducted with some of the key informants. Key informants were asked to comment about the ability of teachers in their schools to use student and peer feedback positively and one of them responded as follows,

Feedback is a very vital ingredient of teacher improvement. However, most of our teachers lack sufficient ability to collect let alone to use feedback from peers and students they teach. I think there is need for guiding them and supporting them on how to use feedback to improve their teaching (Key Informant P).

Clearly, the quantitative and qualitative findings demonstrated that teachers' ability to use feedback from their peers and students in selected government-aided secondary schools in Iganga District was not sufficiently desirable.

One of the dimensions of teacher effectiveness was ability to create and positive classroom environment, which was assessed using two items, "Teachers in my school create a well-coming & inclusive classroom environment before and during teaching" and "Teachers in my school establish clear classroom rules before & during teaching." The results in Table 4.3 indicate that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), further cementing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying respondents did not differ much in terms of their opinions on the two items. These survey findings appeared to augur with the findings generated from interviews that were conducted with some of the key informants. For instance, when asked to comment about the ability of teachers in their schools to create positive learning environments for students while in class, one key informants remarked that,

Unlike before classrooms are very diverse in terms the students we have. When it comes to creating positive classroom environments, many of our teachers struggle. They need support to enhance their classroom management skills (Key Informant K).

Overall, the quantitative and qualitative findings demonstrated that teachers' ability to create a positive classroom environment in selected government-aided secondary schools in Iganga District was generally low.

Another dimension of teacher effectiveness was ability to engage students, which was assessed using two items, "Teachers in my school use interactive & engaging methods when teaching" and "Teachers in my school allow students to engage in free discussion about what they teach." The results in Table 4.3 indicate that most respondents either agreed or strongly agreed with these two statements. The corresponding mean values corresponding to the two items were less than the threshold mean of agreeing with a particular item (3.5), further implying that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying there were no significant variations in respondents' opinions on the two items. These survey findings were supported by findings generated from key informant interviews. For instance, when asked to comment about the ability of teachers in their schools to effectively engage students while in class, one of the key informants remarked that,

Some of our teachers find it difficult to make their lessons interesting and interactive, and this affects the enthusiasm of the learners, which in turn also affects the performance of the learners. But with support, I think they can do better (Key Informant H).

Overall, the quantitative and qualitative findings demonstrated that teachers' ability to create a to effectively engage students in learning processes in selected government-aided secondary schools in Iganga District was generally low.

Helping students make academic progress was also one of the dimensions of teacher effectiveness, and it was assessed using two items, "Teachers in my school effectively communicate learning goals to their students" and "Teachers in my school provide timely & constructive feedback that supports learning by students." The results in Table 4.3 indicate that most respondents either disagreed or strongly disagreed with these two statement. The corresponding mean values were below the threshold mean of agreeing with a particular item (3.5), further reinforcing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying the variations in respondents' opinions on these items were not big. These survey findings were consistent with the findings generated from interviews conducted with some of the key informants. For instance, when asked to comment about the ability of teachers in their schools to help students make academic progress, one key informants remarked that,

Teachers try so hard to help students achieve good academic progress, but unfortunately the results year-in-year out are never encouraging for both students and parents. (Key Informant P).

Overall, the quantitative and qualitative findings demonstrated that teachers' ability to help students make tangible academic progress in selected government-aided secondary schools in Iganga District appears wanting.

Teacher effectiveness was also measured in terms of ability to use feedback from students and peers positively, and this indicator was assessed using two items, “Teachers in my school are receptive to feedback from their students & use it to improve their teaching” and “Teachers in my school seek opinions from their fellow colleagues and value the feedback they receive.” The results in Table 4.3 show that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were lower than the threshold mean of agreeing with a particular item (3.5), further cementing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying respondents did not differ much in terms of their opinions on the two items. These survey findings were in line with the findings generated from interviews that were conducted with some of the key informants. Key informants were asked to comment about the ability of teachers in their schools to use student and peer feedback positively and one of them responded as follows,

Feedback is a very vital ingredient of teacher improvement. However, most of our teachers lack sufficient ability to collect let alone to use feedback from peers and students they teach. I think there is need for guiding them and supporting them on how to use feedback to improve their teaching (Key Informant G).

Clearly, the quantitative and qualitative findings demonstrated that teachers’ ability to use feedback from their peers and students in selected government-aided secondary schools in Iganga District was not sufficiently desirable.

The last dimension of teacher effectiveness was willingness and ability to participate in activities aimed at improving professional growth and development. This dimension was assessed using two items, “Teachers in my school are always seeking for opportunities to develop professionally” and

“Teachers in my school are always seeking for information about current education practices.” The results in Table 4.3 indicate that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), further cementing the reality that generally most respondents disagreed with the two items. The corresponding standard deviations were generally low, implying respondents did not differ much in terms of their opinions on the two items. Clearly, the quantitative findings demonstrated that teachers’ willingness and ability to participate in activities aimed at growing and developing professionally was found wanting in selected government-aided secondary schools in Iganga District was generally low.

Overall, the results of quantitative and qualitative analysis presented above clearly showed that most respondents generally disagreed with all the statements that were measuring the concept of teacher effectiveness. That is, they disagreed with statements measuring the ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and willingness and ability to participate in professional growth and development activities. Clearly, the study findings suggest that teacher effectiveness in selected government-aided secondary schools in Iganga District is low. These findings are consistent with earlier studies that portrayed existence of poor teacher effectiveness aspects in Iganga District (Michael & Kinuthia, 2022; Namugaya et al., 2021; Nombo et al., 2020), and underscore a need for improving the status-quo.

4.4 Frequency of Collaboration and Teacher Effectiveness

Objective one sought to establish the influence of frequency of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District. Achieving this objective entailed first analyzing respondents' views on frequency of teacher collaboration before determining its influence on teacher effectiveness.

4.4.1 Frequency of Teacher Collaboration

To assess the frequency of teacher collaboration in selected Government-aided secondary schools in Iganga District, 8 items were formulated focusing on regularity, consistency, intensity, and duration of teacher collaboration. Survey respondents (school teachers) were requested to indicate how far they agree or disagree with the 8 items. Their responses were rated on a likert scale consisting of 5 points starting from strongly disagree (1) to strongly agree (5). "Strongly agree" and "Agree" responses were integrated into "Agree" responses, while "Strongly disagree" and "Disagree" responses were integrated into "Disagree" responses. Respondents' views on the 8 items were analyzed using descriptive statistics such as standard deviations, means, percentages, and frequencies. Table 4.4 reflects a summary of analysis of respondents' views on frequency of teacher collaboration in selected Government-aided secondary schools in Iganga District.

Table 4.4: Respondents' Views on Frequency of Teacher Collaboration

Items on frequency of teacher collaboration	Disagree	Neutral	Agree	Mean	Std. Dev
Teachers in my school collaborate with each other on a regular basis	61 (50%)	15 (12.3%)	40 (37.7%)	2.688	1.021
I am satisfied with the number of times teachers in my school collaborate with each other in a term	66 (54.1%)	10 (8.2%)	46 (37.7%)	2.678	1.113
Collaboration among teachers in my school is always an on-going practice	72 (59.1%)	7 (5.7%)	43 (35.2%)	2.566	1.209
Consistent collaboration among teachers in my school is part of my school culture	74 (60.6%)	11 (9%)	37 (30.3%)	2.525	1.222
Teachers in my school take issues of collaboration seriously	62 (50.8%)	18 (14.8%)	32 (34.4%)	2.721	1.295
Teachers in my school engage in deeper discussions whenever they are collaborating with each other	67 (54.9%)	16 (13.1%)	39 (32.0%)	2.615	1.146
Teachers in my school allocate sufficient time to collaborative activities	72 (58.0%)	5 (4.1%)	45 (36.9%)	2.639	1.271
Teachers in my school spare ample time to discuss matters related to working together for the benefit of students	65 (53.3%)	10 (8.2%)	47 (38.5%)	2.754	1.222

One of the dimensions of frequency of teacher collaboration was regularity of collaboration, which was assessed using two items, “Teachers in my school collaborate with each other on a regular basis” and “I am satisfied with the number of times teachers in my school collaborate with each other in a term.” The results in Table 4.4 indicate that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), further suggesting the reality that

generally most respondents disagreed with the two items. When key informants were asked to comment about the regularity of collaboration among teachers in their schools, this is what one of the key informants had to say,

It is a pity but the level of meaningful collaboration among our teachers falls short what is needed to drive excellence in teaching and learning (Key Informant F).

From the quantitative and qualitative findings above, it is clear that the regularity of collaboration among teachers in selected government-aided secondary schools in Iganga District was found to be generally low.

Frequency of teacher collaboration was also measured in terms of the consistency of teachers' collaboration endeavors using two items, "Collaboration among teachers in my school is always an on-going practice" and "Consistent collaboration among teachers in my school is part of my school culture." The results in Table 4.4 indicate that most respondents either disagreed or strongly disagreed with these two statements measuring consistence of teacher collaboration. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), which further confirms that generally most respondents disagreed with the two items. Moreover, the corresponding standard deviations figures were small, implying that the variation in respondents' opinions on these two items was generally insignificant. Even the qualitative findings obtained from the study appeared to confirm the survey findings as one of the key informants remarked as follows when asked to comment about the consistency of teacher collaboration in their schools,

Yes, there are a few teachers here and there who engage in meaningful collaboration with their colleagues, but they only do it once in a while. They need to be guided and supported

to collaborate more consistently because the practice is extremely invaluable to teacher improvement (Key Informant N).

The results above demonstrate that consistency of collaboration among teachers in selected government-aided secondary schools in Iganga District leaves a lot to be desired.

Frequency of collaboration was also measured in terms intensity of collaboration. This dimension was assessed using two dimensions, “Teachers in my school take issues of collaboration seriously” and “Teachers in my school engage in deeper discussions whenever they are collaborating with each other.” As indicated in Table 4.4, most respondents either disagreed or strongly disagreed with these two statements on intensity of teacher collaboration. The corresponding mean values were lower than the threshold mean of agreeing with a particular item (3.5), further confirming that generally most respondents disagreed with the two items. Even the standard deviation figures corresponding to the two items were generally low, implying most respondents were uniform in their opinions regarding the two items. When key informants were asked to comment about the intensity or how seriously their teachers consider the practice of collaboration, one of the key informants’ responses was that,

It is a bit disheartening that many teachers hardly prioritize working together to improve themselves and the students they teach, yet collaborating has the potential of improving their teaching practices and the learning outcomes of students (Key Informant S).

The quantitative and qualitative findings above demonstrate that teachers in selected government-aided secondary schools in Iganga District do not take seriously the idea of collaborating with one another to improve their teaching practices and the learning outcomes of students.

The final dimension of frequency of teacher collaboration examined in this study relates to duration of teacher collaboration or the amount of time teachers invest in collaborative activities. This dimension was also assessed using two items, “Teachers in my school allocate sufficient time to collaborative activities” and “Teachers in my school spare ample time to discuss matters related to working together for the benefit of students.” However, the results displayed in Table 4.4 showed that most respondents either disagreed or strongly disagreed with statements related to duration of teacher collaboration. Even one of the key informants, when asked to comment about the amount of time that teachers in their school allocate to collaborative activities, one of them remarked as follows,

Because many of them don't appreciate the value in collaborating with one another, they hardly invest enough time in activities of working together to improve themselves and the students they teach. (Key Informant Q).

Overall, the results of quantitative and qualitative analysis presented above clearly showed that most respondents generally disagreed with all the statements that were measuring the concept of frequency of collaboration. That is, they disagreed with statements measuring the regularity, consistency, intensity, and duration of teacher collaboration. Clearly, the study findings suggest that frequency of collaboration among teachers in selected government-aided secondary schools in Iganga District is generally poor.

4.4.2 Influence of Frequency of Collaboration on Teacher Effectiveness

Having established the frequency of teacher collaboration in selected Government-aided secondary schools in Iganga District, there was need to determine whether it influences teacher effectiveness through the technique of bivariate correlation. Two composite (index) scores

corresponding to frequency of collaboration and teacher effectiveness were computed using the “Transform” > “Record into Different Variables” option in the SPSS analysis tool. It is these composite scores that were subjected to hypothesis testing using the technique of bivariate correlation. The following hypothesis was tested: frequency of collaboration does not significantly influence teacher effectiveness in selected Government-aided secondary schools in Iganga District. The results of hypothesis testing using bivariate correlation analysis are summarized in Table 4.5.

Table 4.5: Correlation between Frequency of Collaboration and Teacher Effectiveness

		Frequency of Collaboration	Teacher Effectiveness
Frequency of Collaboration	Pearson Correlation	1	.406**
	Sig. (2-tailed)		.000
	N	122	122
Teacher Effectiveness	Pearson Correlation	.406**	1
	Sig. (2-tailed)	.000	
	N	122	122

The Pearson’s correlation coefficient is 0.406. It is positive implying that the influence of frequency of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District is positive. That is, in the context of selected Government-aided secondary schools in Iganga District, the higher the regularity, consistency, intensity, and duration of collaboration; the higher the ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. On the other hand, the lower the regularity, consistency, intensity, and duration of collaboration; the lower the ability of teachers to create favorable learning environments, engage students in learning

processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. The corresponding probability value was found to be less than 0.05, which implies that the hypothesis that frequency of collaboration does not significantly influence teacher effectiveness in selected government-aided secondary schools in Iganga District was rejected. It was concluded that frequency of collaboration does influence teacher effectiveness in selected government-aided secondary schools in Iganga District. The finding of statistically significant results in relation to the hypothesis tested signifies that the realized influence of frequency of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District was real, and was unlikely to have occurred due to random variability in the data.

4.5 Format of Collaboration and Teacher Effectiveness

Objective two sought to determine the influence of format of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District. As it was in the case of the first objective, achieving this objective entailed first analyzing respondents' views on format of teacher collaboration before determining its influence on teacher effectiveness.

4.5.1 Format of Teacher Collaboration

Assessing the format of teacher collaboration in selected Government-aided secondary schools in Iganga District, 8 items were formulated focusing on peer observation, online collaboration, co-teaching, and participation in professional learning communities (PLCs). Survey respondents (school teachers) were requested to indicate how far they agree or disagree with the 8 items. Their responses were rated on a likert scale consisting of 5 points starting from strongly disagree (1) to strongly agree (5). For simplified data presentation, "Strongly agree" and "Agree" responses were

combined into “Agree” responses, while “Strongly disagree” and “Disagree” responses were combined into “Disagree” responses. Respondents’ views on the 8 items were analyzed using descriptive statistics such as standard deviations, means, percentages, and frequencies. Table 4.6 reflects a summary of analysis of respondents’ views on format of teacher collaboration in selected Government-aided secondary schools in Iganga District.

Table 4.6: Respondents’ Views on Format of Teacher Collaboration

Items on format of teacher collaboration	Agree	Neutral	Disagree	Mean	Std. Dev
Peer observation is a common practice of teaching in this school	71 (58.1%)	6 (4.9%)	45 (36.9%)	2.598	1.041
Teachers in this school embrace the idea of observing their colleagues when they are teaching in class	66 (54.1%)	10 (8.2%)	46 (37.7%)	2.711	1.128
Online collaborations are a common thing in this school	70 (57.4%)	7 (5.7%)	45 (36.8%)	2.625	1.192
Teachers in this school embrace the idea of working together using internet based forums	74 (60.6%)	11 (9%)	37 (30.3%)	2.525	1.109
Co-teaching is a common practice in this school	62 (50.8%)	18 (14.8%)	42 (34.4%)	2.754	1.062
Teachers in this school embrace the idea of teaching together with their colleagues in the same class	67 (54.9%)	16 (13.1%)	39 (32.0%)	2.639	1.189
Professional learning communities are a common thing in this school	72 (59.0%)	5 (4.1%)	45 (36.9%)	2.663	1.098
Teachers in this school love working together through professional learning communities	65 (53.3%)	10 (8.2%)	47 (38.5%)	2.705	1.182

One of the dimensions of format of teacher collaboration was extent to which teachers are engaged in peer observation, and this dimension was assessed using two items, “Peer observation is a common practice of teaching in this school” and “Teachers in this school embrace the idea of observing their colleagues when they are teaching in class.” The results in Table 4.6 indicate that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were found to be less than the threshold mean of agreeing with a particular item (3.5), further suggesting the reality that generally most respondents disagreed with the two items. When key informants were asked to comment about the regularity of collaboration among teachers in their schools, this is what one of the key informants had to say,

In this school, peer observation is very rare. Teachers focus more on their own classrooms and schedules than observe how their colleagues are going about the teaching exercise
(Key Informant A).

It is clear from the above quantitative and qualitative results that peer observation among teachers in selected government-aided secondary schools in Iganga District is a rare occurrence.

Another dimensions of format of teacher collaboration examined in this study was the extent to which teachers engage in online collaborations. The dimension was assessed using two items, “Online collaborations are a common thing in this school” and “Teachers in this school embrace the idea of working together using internet based forums.” Table 4.6 results showed that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were low compared to the threshold mean of agreeing with a particular item (3.5), which further confirmed that generally most respondents disagreed with the two items. Even one

of the key informant respondents' responses appeared to support the reality regarding teachers' engagement in online collaborations. One of them remarked that,

Although many teachers have smartphones today, working together for the sake of improving themselves and students using digital devices is not frequent (Key Informant C).

It is apparent from the quantitative and qualitative findings above that online collaboration among teachers in selected government-aided secondary schools in Iganga District is generally poor.

There was also the dimension of extent to which teachers engage in co-teaching as a measure of format of teacher collaboration. Like others, this dimension was assessed using two items, "Co-teaching is a common practice in this school" and "Teachers in this school embrace the idea of teaching together with their colleagues in the same class." The results in Table 4.6 revealed that most respondents either disagreed or strongly disagreed with these two statements. The corresponding mean values were low compared to the threshold mean of agreeing with a particular item (3.5), which confirms that generally most respondents disagreed with the two items. The corresponding standard deviation figures were generally small, which means that respondents did not differ so much in their opinions on these two items. What the overall picture depicts is that co-teaching as a way of collaboration is not common among teachers in selected government-aided secondary schools in Iganga District.

The final dimension examined under format of teacher collaboration was the extent to which teachers engage in professional learning communities. The dimension was assessed using two items, "Professional learning communities are a common thing in this school" and "Teachers in this school love working together through professional learning communities." Table 4.6 results demonstrate that most respondents either disagreed or strongly disagreed with these two

statements. The mean values attached to the two items were below the threshold mean of agreeing with a particular item (3.5), which cements the reality that generally most respondents disagreed with the two items. The corresponding standard deviation figures were generally small, which means that respondents' opinions on this two items did not vary significantly. One of the key informant responses appeared to support the survey finding because it noted that,

I know the value of professional learning communities because in one of the schools I taught, they were there. Unfortunately, in this school the idea of professional learning communities has never found space among ideas of improving teacher practices (Key Informant L).

It is evident from the above results that professional learning communities as a way of collaboration is not a common practice among teachers in selected government-aided secondary schools in Iganga District.

Overall, the results of quantitative and qualitative analysis presented above clearly showed that most respondents generally disagreed with all the statements that were measuring the construct of format of collaboration. That is, they disagreed with statements measuring the extent to which teachers engage in peer observation, online collaboration, co-teaching, and professional learning communities as ways of collaboration. Clearly, the study findings suggest that frequency of collaboration among teachers in selected government-aided secondary schools in Iganga District is generally poor.

4.5.2 Influence of Format of Collaboration on Teacher Effectiveness

After determining the format of teacher collaboration in selected Government-aided secondary schools in Iganga District, there was need to determine whether it influences teacher effectiveness using the technique of bivariate correlation. Like it was done in the case of the first objective, two composite (index) scores corresponding to format of collaboration and teacher effectiveness were computed using the “Transform” > “Record into Different Variables” option in the SPSS analysis tool. It is these composite scores that were subjected to hypothesis testing using the technique of bivariate correlation. The following hypothesis was tested: format of collaboration does not significantly influence teacher effectiveness in selected Government-aided secondary schools in Iganga District. The results of hypothesis testing using bivariate correlation analysis are summarized in Table 4.7.

Table 4.7: Correlation between Format of Collaboration and Teacher Effectiveness

		Format of Collaboration	Teacher Effectiveness
Format of Collaboration	Pearson Correlation	1	.335**
	Sig. (2-tailed)		.002
	N	122	122
Teacher Effectiveness	Pearson Correlation	.335**	1
	Sig. (2-tailed)	.002	
	N	122	122

Table 4.7 indicates a Pearson’s correlation coefficient of 0.335. It is positive implying that the influence of format of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District is positive. That is, in the context of selected Government-aided secondary schools in Iganga District, the more teachers engage in different ways of collaboration including co-teaching, peer observation, online collaborations, and participating in

professional learning communities; the higher their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. On the other hand, the less the teachers engage in different ways of collaboration including co-teaching, peer observation, online collaborations, and participating in professional learning communities; the lower their ability to effectively manage the classroom learning environment, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. The corresponding probability value was found to be less than 0.05, which implies that the hypothesis that format of collaboration does not significantly influence teacher effectiveness in selected government-aided secondary schools in Iganga District was rejected. It was concluded that format of collaboration does influence teacher effectiveness in selected government-aided secondary schools in Iganga District. The finding of statistically significant results in relation to the hypothesis tested signifies that the realized influence of format of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District was real, and was unlikely to have occurred due to random variability in the data.

4.6 Focus of Collaboration and Teacher Effectiveness

The last objective of this study was to assess the influence of focus of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District. The same approach used in handling objectives one and two was used in handling this particular objective. Respondents' views on focus of teacher collaboration were first analyzed before determining their effect on teacher effectiveness.

4.6.1 Focus of Teacher Collaboration

Similar to what was done in the first and second objectives, to assess the format of teacher collaboration in selected Government-aided secondary schools in Iganga District, 8 items were formulated focusing on lesson plan development, designing assessment activities, analyzing student performance, and managing classroom challenges. Survey respondents (school teachers) were requested to indicate how far they agree or disagree with the 8 items. Their responses were rated on a likert scale consisting of 5 points starting from strongly disagree (1) to strongly agree (5). “Strongly agree” and “Agree” responses were integrated into “Agree” responses, while “Strongly disagree” and “Disagree” responses were integrated into “Disagree” responses. Respondents’ views on the 8 items were analyzed using descriptive statistics such as standard deviations, means, percentages, and frequencies. Table 4.8 highlights a summary of analysis of respondents’ views on focus of teacher collaboration in selected Government-aided secondary schools in Iganga District.

Table 4.8: Respondents' Views on Focus of Teacher Collaboration

Items on focus of teacher collaboration	Disagree	Neutral	Agree	Mean	Std. Dev
Teachers in this school collaborate with their colleagues to develop lesson plans are in line with the curriculum standards	70 (57.4%)	7 (5.7%)	45 (36.9%)	2.79	1.295
Teachers in this school actively seek input from their colleagues when developing lesson plans	72 (59.0%)	10 (8.2%)	40 (32.8%)	2.745	1.208
Working together to design learning & assessment activities is a common practice among teachers in this school	66 (54.1%)	10 (8.2%)	46 (37.7%)	2.678	1.114
Teachers in this school work together when setting student exams	72 (59.0%)	5 (4.1%)	45 (36.9%)	2.615	1.271
Teachers in this school work together in analyzing student academic performance	66 (54.1%)	10 (8.2%)	46 (37.7%)	2.711	1.128
Teachers in this school are open to sharing and receiving feedback from their colleagues about students' academic performance	72 (59.0%)	5 (4.1%)	45 (36.9%)	2.663	1.098
Teachers in this school work together to solve classroom challenges	67 (54.9%)	15 (13.1%)	30 (28.4%)	2.617	1.340
Teachers in this school feel supported by their colleagues in managing problems of students in classrooms	74 (60.6%)	11 (9%)	37 (30.3%)	2.685	1.252

4.6.2 Influence of Focus of Collaboration on Teacher Effectiveness

After ascertaining the respondents' views on the focus of teacher collaboration in selected Government-aided secondary schools in Iganga District, the researcher proceeded to determine whether it influences teacher effectiveness using the technique of bivariate correlation. The same approach used in handling objectives one and two was also used in handling objective three. Two composite (index) scores corresponding to focus of collaboration and teacher effectiveness were computed using the "Transform" > "Record into Different Variables" option in the SPSS analysis

tool. It is these composite scores that were subjected to hypothesis testing using the technique of bivariate correlation. The following hypothesis was tested: focus of collaboration does not significantly influence teacher effectiveness in selected Government-aided secondary schools in Iganga District. The results of hypothesis testing using bivariate correlation analysis are summarized in Table 4.9.

Table 4.9: Correlation between Focus of Collaboration and Teacher Effectiveness

		Focus of Collaboration	Teacher Effectiveness
Focus of Collaboration	Pearson Correlation	1	.179**
	Sig. (2-tailed)		.000
	N	122	122
Teacher Effectiveness	Pearson Correlation	.179**	1
	Sig. (2-tailed)	.000	
	N	122	122

The results in Table 4.9 indicate a Pearson’s correlation coefficient of 0.179. It is positive implying that the influence of focus of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District was positive. That is, in the context of selected Government-aided secondary schools in Iganga District, the more teachers engage in collaborative activities aimed at developing lesson plans, designing assessment activities, analyzing student performance, and managing classroom challenges; the higher their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. On the other hand, the less teachers engage in collaborative activities aimed at developing lesson plans, designing assessment activities, analyzing student performance, and

managing classroom challenges; the lower their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities. The corresponding probability value was found to be less than 0.05, which implies that the hypothesis that focus of collaboration does not significantly influence teacher effectiveness in selected government-aided secondary schools in Iganga District was rejected. It was concluded that focus of collaboration does influence teacher effectiveness in selected government-aided secondary schools in Iganga District. The finding of statistically significant results in relation to the hypothesis tested signifies that the realized influence of focus of collaboration on teacher effectiveness in selected Government-aided secondary schools in Iganga District was real, and was unlikely to have occurred due to random variability in the data.

4.7 Multiple Regression Analysis Results

To understand which of the three independent variables had the biggest influence on the dependent variable, multiple regression analysis was conducted. Figure 4.1 represents a summary of findings of multiple regression.

Model Summary

Model	R	R Square	Adjusted R Square	R Square Change	Sig. F Change
1	.426	.181	.154	.181	.000

- a. Predictors: (Constant), Frequency of collaboration, Format of collaboration, Focus of collaboration
- b. Dependent Variable: Teacher effectiveness

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	653.056	3	217.85	6.650	.000
	Residual	2946.178	119	32.35		
	Total	3599.234	122			

- a. Dependent Variable: Teacher effectiveness
- b. Predictors: (Constant), Frequency of collaboration, Format of collaboration, Focus of collaboration

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
1		B	Std. Error	Beta	t	Sig.
	Constant	43.697	3.602		12.133	.000
	Frequency of collaboration	2.385	.999	.367	2.387	.019
	Format of collaboration	.980	1.120	.129	.875	.038
	Focus of collaboration	.451	.903	.068	.500	.016

Dependent Variable: Teacher effectiveness

Figure 4.1: Results of multiple regression analysis

From the coefficients table in Figure 4.1, of the three independent variables, frequency of collaboration had the largest relative influence (36.7%) on teacher effectiveness, followed by format of collaboration (12.9%) and focus of collaboration (6.8%) respectively. The *R* Square in the Model Summary is 0.181, which implies that 18.1% of the variation in teacher effectiveness in government-aided secondary schools in Iganga District. The *F*-statistic in the ANOVA is 6.650 and its corresponding probability value is less than 5% value. This means that value of *R*-squared is statistically significant.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Introduction

This chapter of the research report contains the discussion of the study findings. The findings are discussed systematically following the objectives of the study.

5.1 Influence of Frequency of Collaboration on Teacher Effectiveness

The first objective sought to establish the influence of frequency of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. From the descriptive analysis of findings summarized in Table 4.4, frequency of collaboration among teachers in selected Government-aided secondary schools in Iganga District was generally low in terms of regularity, consistency, intensity, and duration. It was also clear from the descriptive analysis of quantitative findings summarized in Table 4.3 that teacher effectiveness in selected Government-aided secondary schools in Iganga District was generally low. The findings summarized under Table 4.5 clearly demonstrated that low frequency of collaboration was significantly associated with low teacher effectiveness in the selected government-aided secondary schools in Iganga District ($r = 0.406$; $p < 0.05$).

The findings of this study are consistent with the Social Learning Theory of Albert Bandura, and reinforce its explanatory power in relation to the current study. According to Rotter (2021), whenever teachers collaborate less frequently; they are deprived of the opportunity of learning from each other because they are unable to hear what others say and observe what they do (study

aligns with assumption 1 of Social Learning theory); and pay less attention to what others say and do, fail to memorize it, and fail to reflect on it (study aligns with assumption 2 of Social Learning theory). In addition, they are unable to set their own goals of collaboration, monitor progress towards achievement of those goals, and make necessary adjustments to their teaching effectiveness in light of the feedback they receive from their colleagues and the self-reflection they engage in (study aligns with assumption 4 of Social Learning theory).

According to Lefstein et al. (2020), teachers need to collaborate regularly because it helps them to stay current with teaching trends and practices, and this enhances their ability to positively impact the learning and achievement outcomes of students. However, the findings revealed that there is low regularity of collaboration among teachers in the surveyed research sites. From Lefstein et al. (2020), low regularity of collaboration implies that teachers are unable to gain knowledge of the current teaching trends and practices, which in turn compromises their effectiveness. Therefore, if teacher effectiveness in selected government-aided secondary schools in Iganga District is to be enhanced, the responsible Ministry and School Administrators need to put in place a supportive mechanisms that encourages teachers to collaborate more regularly.

In addition, Voogt et al. (2018) argued that collaborating consistently builds trust among teachers, and it makes it easier for them to rely on support of one another to enhance their professional growth. From the study, it was found that the consistence of collaboration among teachers in selected government-aided secondary schools in Iganga District was generally low. Low consistence of collaboration implies low trust building among teachers, which makes it difficult for them to rely on support from one another to enhance their professional growth (Voogt et al.,

2018). It also means they are unable to share knowledge and expertise on superior teaching methods and techniques, which in turn compromises their effectiveness (Voogt et al., 2018). Therefore, there is need for putting in place a mechanism that encourages and supports teachers in the surveyed research sites to collaborate more consistently if they are to enhance their effectiveness.

It is also important that teachers intensify their collaborative efforts because it enables them to share their knowledge and expertise on teaching practices, and this can lead to acquisition of superior teaching methods and instructional strategies, which ultimately enhances their effectiveness or ability to positively impact the learning and achievement outcomes of students (Lefstein et al., 2020). The findings also revealed that intensity of collaboration among teachers in selected government-aided secondary schools in Iganga District was low. Low intensity of collaboration implies teachers are unable to share their knowledge and expertise on effective teaching methods and instructional strategies, which ultimately compromises their ability to positively impact the learning and achievement outcomes of students. Therefore, for enhanced teacher effectiveness in the selected schools, it is important that the concerned Ministry and School Administrators create a supportive mechanism that encourages higher intensity of collaboration among teachers.

De-Jong et al. (2019) also contends that investing more time in collaborative efforts accords teachers adequate opportunity to explore multiple solutions to challenges that they may encounter during the teaching and learning process, and choose only those that enable them to effectively impact the learning and achievement outcomes of students in a positive way. Clearly, the findings

revealed that the amount of time that teachers in the selected schools allocate to collaborative activities was generally low, which means they are deprived of an opportunity to adequately explore multiple solutions to challenges that they may encounter during the teaching and learning process, and choose only those that enable them to effectively impact the learning and achievement outcomes of students in a positive way. Therefore, it is important that the concerned Ministry and School Administrators prioritize investing in a supportive mechanism that encourages teachers in government-aided secondary schools in Iganga District to increase their duration of collaboration and enhance their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

5.2 Influence of Format of Collaboration on Teacher Effectiveness

The second objective sought to determine the influence of format of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. From the descriptive analysis of findings summarized in Table 4.6, only a few teachers in selected Government-aided secondary schools in Iganga District explored different ways of collaborating including peer observation, PLCs, co-teaching, and online collaborations. Descriptive analysis of quantitative findings summarized in Table 4.3 demonstrated that teacher effectiveness in the selected Government-aided secondary schools in Iganga District was generally low. The findings summarized under Table 4.7 clearly demonstrated that poor engagement in collaborative ways was significantly associated with low teacher effectiveness in the selected government-aided secondary schools in Iganga District ($r = 0.335$; $\rho < 0.05$).

The findings of the study in this regard were consistent with the Social Learning theory, and they reinforce its validity in explaining the link between format of collaboration and teacher effectiveness in government-aided secondary schools in Iganga District. From Rotter (2021), whenever teachers don't explore various ways of collaborating; they are deprived of the opportunity of learning from each other because they are unable to hear what others say and observe what they do (study aligns with assumption 1 of Social Learning theory); and pay less attention to what others say and do, fail to memorize it, and fail to reflect on it (study aligns with assumption 2 of Social Learning theory). In addition, they are unable to set their own goals of collaboration, monitor progress towards achievement of those goals, and make necessary adjustments to their teaching effectiveness in light of the feedback they receive from their colleagues and the self-reflection they engage in (study aligns with assumption 4 of Social Learning theory).

The findings from this study revealed that teachers in the surveyed research sites were less engaged in peer observation as one of the ways of collaboration. From Fletcher (2018), not exploring peer observation as a way of collaboration, means that teachers are deprived of the opportunity of reflecting on their own teaching practices, receiving advice from their colleagues regarding their teaching practices, and making informed decisions on how to refine their teaching strategies and techniques, which compromises their teaching practices and learning outcomes of students. It is therefore important that teachers are encouraged and supported to explore engaging more in peer observation as one of the ways of working together to achieve desired teaching and learning goals.

It was also evident from the findings of the study that teachers in the selected research sites were less engaged in professional learning communities as a way of working together to achieve desired teaching and learning objectives. From Prenger et al. (2019), failure to sufficiently explore collaboration through professional learning communities deprives teachers the opportunity of engaging in deeper discussions, reflecting deeply on their own teaching methods, and identifying appropriate teaching interventions. This is why it is necessary to encourage and support teachers in government-aided secondary schools in Iganga District to explore engaging more in professional learning communities as a way of working together to achieve common teaching and learning goals.

Last but not least, the study found that teachers in the surveyed schools were less engaged in co-teaching as one of the ways of working together to achieve desired teaching and learning goals. Using Strogilos and King-Sears (2019) analogy, failing to explore co-teaching as a form of collaboration deprives teachers the opportunity of exploring diverse knowledge and skills to plan, deliver, and assess their instruction practices, which leads to ineffective handling of the diverse student learning needs. Thus, it is important that teachers in government-aided secondary schools in Iganga District are encouraged and supported to explore engaging more in co-teaching as one of the ways of working together to achieve desired teaching and learning objectives.

5.3 Influence of Focus of Collaboration on Teacher Effectiveness

The third objective sought to assess the influence of focus of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. From the descriptive analysis of findings summarized in Table 4.8, only a few teachers in selected Government-aided secondary

schools in Iganga District engaged in collaboration for the purpose of developing lesson plans, designing learning and assessment activities, analyzing student performance, and managing classroom challenges. Descriptive analysis of quantitative findings summarized in Table 4.3 demonstrated that teacher effectiveness in the selected Government-aided secondary schools in Iganga District was generally low. The findings summarized under Table 4.9 clearly demonstrated that poor engagement in collaboration for the purpose of developing lesson plans, designing learning and assessment activities, analyzing student performance, and managing classroom challenges, was significantly associated with low ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities ($r = 0.179$; $p < 0.05$).

From this study, it is clear that Social Learning theory has value in explaining the phenomenon under study. According to Rotter (2021), whenever teachers are less motivated to engage in collaboration and gain associated benefits; they are deprived of the opportunity of learning from each other because they are unable to hear what others say and observe what they do (study aligns with assumption 1 of Social Learning theory); and pay less attention to what others say and do, fail to memorize it, and fail to reflect on it (study aligns with assumption 2 of Social Learning theory). In addition, they are unable to set their own goals of collaboration, monitor progress towards achievement of those goals, and make necessary adjustments to their teaching effectiveness in light of the feedback they receive from their colleagues and students as well as the self-reflection they engage in (study aligns with assumption 4 of Social Learning theory). Again, the failure to improve in their way of teaching and impact students' learning outcomes may be

moderated by other factors such teachers' personality and students' behavior (study aligns with assumption 3 of Social Learning theory).

It was evident from the study findings that teacher engagement in collaboration for the purpose of enhancing their lesson planning knowledge and skills was generally poor. Whenever teachers decide to not collaborate in lesson planning, they are unable to benefit from an opportunity of sharing lesson planning knowledge, skills, and experiences, which may lead to the development of poor lesson plans that do not address the diverse needs of teachers and students respectively (Cevikbas et al., 2023). In addition, poor teacher collaboration in lesson planning, deprives teachers an opportunity of learning from one another, sharing best practices, and staying updated on current trends in teaching and learning (Backfisch et al., 2020). Therefore, if teacher effectiveness in government-aided secondary schools in Iganga District is to be enhanced, it is important that teachers are encouraged and supported to realize the value of collaborating more in lesson planning.

The findings of the study further revealed that collaboration for the purpose of designing learning and assessment activities was not well appreciated. When teachers do not collaborate in designing learning and assessment activities, they are deprived of diversity of knowledge, experience, expertise, and perspectives in designing learning and assessment activities (Wanner & Palmer, 2015). This leads to the development of learning and assessment activities that do not serve the broader and diverse needs of students. Also, failure to collaborate in designing learning and assessment activities, deprives teachers the opportunity of critically reviewing the proposed learning and assessment activities, and making appropriate adjustments where necessary (Wanner

& Palmer, 2015). This is why it important to encourage and support teachers in government-aided secondary schools in Iganga District to realize the benefits of collaborating more for the purpose of designing effective learning and assessment activities.

It was also evident from the findings of the study that collaboration for the purpose of analyzing students' academic performance leaves a lot to be desired among teachers in the selected government-aided secondary schools in Iganga District. When teachers don't collaborate in analyzing student academic performance, they are deprived of gaining more complete understanding of students' strength, students' weaknesses, and students' learning needs (Jackson, 2018). In addition, when teachers don't collaborate in analyzing students' academic performance, they are deprived of an opportunity of gaining a more accurate and less biased construction of the students' performance, which compromises their ability to design appropriate performance improvement interventions (Jackson, 2018). Therefore, there is need to encourage and support teachers in government-aided secondary schools in Iganga District to realize the value of collaborating more for the purpose of effective analysis of students' academic performance.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This is the final chapter of the report. It presents the conclusions, recommendations, and areas to consider for future research.

6.1 Conclusions from the Study

Like the case was when presenting the discussion of research findings attributed to this study, the conclusions drawn from the findings of this study are presented in a systematic way based on the objectives of the study.

6.1.1 Influence of Frequency of Collaboration on Teacher Effectiveness

One of the guiding research objectives was to establish the influence of frequency of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. Based on research findings presented and analyzed under sub-section 4.4.1, it is concluded that frequency of collaboration significantly influences teacher effectiveness in selected Government-aided secondary schools in Iganga District. In other words, in the context of Government-aided secondary schools in Iganga District, regularity, consistency, intensity, and duration of teacher collaboration; influences of ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.1.2 Influence of Format of Collaboration on Teacher Effectiveness

The other guiding research objective in this study was to determine the influence of format of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. Based on research findings presented and analyzed under sub-section 4.5.1, it is concluded that format of collaboration significantly influences teacher effectiveness in selected Government-aided secondary schools in Iganga District. In other words, in the context of selected Government-aided secondary schools in Iganga District, engaging in different ways of collaboration including co-teaching, peer observation, online collaborations, and participating in professional learning communities; influences ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.1.3 Influence of Focus of Collaboration on Teacher Effectiveness

The last guiding research objective in this study was to assess the influence of focus of collaboration on teacher effectiveness in Government-aided secondary schools in Iganga District. Based on research findings presented and analyzed under sub-section 4.6.1, it is concluded that focus of collaboration significantly influences teacher effectiveness in selected Government-aided secondary schools in Iganga District. In other words, in the context of selected Government-aided secondary schools in Iganga District, engaging in collaborative activities aimed at developing lesson plans, designing assessment activities, analyzing student performance, and managing classroom challenges; influences ability of teachers to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.2 Recommendations from the Study

The recommendations from the study are also presented in a systematic way based on the objectives of the study.

6.2.1 Frequency of Collaboration and Teacher Effectiveness

Frequency of collaboration was found to be a significant factor of teacher effectiveness in selected Government-aided secondary schools in Iganga District. Accordingly, this study recommends to the Ministry Education policy makers and school administrators to create supportive frameworks that can enable teachers to increase their regularity, consistency, intensity, and duration of collaboration and in turn, enhance their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.2.2 Format of Collaboration and Teacher Effectiveness

Format of collaboration was found to be a significant factor of teacher effectiveness in selected Government-aided secondary schools in Iganga District. Accordingly, this study recommends to Ministry Education policy makers and school administrators to put in place a mechanism that encourages and supports teacher engagement in peer observation, online collaboration, co-teaching, and professional learning communities so as to enhance their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.2.3 Focus of Collaboration and Teacher Effectiveness

Focus of collaboration was found to be an influential factor of teacher effectiveness in selected Government-aided secondary schools in Iganga District. Accordingly, this study recommends to Ministry of Education policy makers and school administrators to put in place a mechanisms that encourage and support teachers to engage more in collaboration for the purpose of gaining more knowledge and skills in: designing effective lesson plans, effective learning and assessment activities, analyzing student academic performance, and managing classroom challenges. This will in turn enhance their ability to create favorable learning environments, engage students in learning processes, help students make academic progress, use feedback from peers and students, and participate in professional growth and development activities.

6.3 Areas to Consider for Future Research

Although the study found that teacher collaboration had a significant influence on teacher effectiveness in selected government-aided secondary schools in Iganga District, a number of possible limitations were identified, which need to be addressed through undertaking additional research related to the topic in future.

The study was based self-reported data from teachers, which may introduce response bias. A future study which is based on triangulation of diverse data sources may mitigate this challenge of potential response bias.

The study was based on selected government-aided secondary schools in Iganga District. Therefore, its findings may not be applicable to other geographical contexts. There is need for

conducting more studies on the same topic but considering different geographical contexts and compare results so as to enhance generalizability of findings.

The study was based on a cross-sectional design, which could not establish a cause-effect linkage between teacher collaboration and teacher effectiveness in selected government-aided secondary schools in Iganga District. A study may be done in future using a longitudinal design as this may help establish whether there exists a cause-effect relationship between the constructs studied herein.

The study may have captured the short-term effects of teacher collaboration on teacher effectiveness in selected government-aided secondary schools in Iganga District, but missed out on the long-term effects. It may be necessary to conduct follow-up studies to assess the sustainability of the observed influence of teacher collaboration on teacher effectiveness in selected government-aided secondary schools in Iganga District.

Finally, the study investigated the influence of teacher collaboration on teacher effectiveness in selected government-aided secondary schools in Iganga District. However, teacher collaboration may not entirely account for the observed on teacher effectiveness in selected government-aided secondary schools in Iganga District. Therefore, there may be a need for studies that take into account more independent variables and potential moderating variables.

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APPENDICES

Appendix 1: Table for Determining Appropriate Sample Size

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Appendix 2: Consent Form for Participants

Introduction: I am, SEMWANGA MOSES (RM21MO6/12), a researcher from Uganda Christian University. I am conducting a study entitled “Teacher Collaboration and Teacher Effectiveness in Selected Government Aided Secondary Schools in Iganga District, Uganda”.

Guidance (SOPs): Ensure you adhere to the COVID-19 prevention guidelines; for instance, social distance, regularly washing hands with soap and wear a face mask. Ensure you have a sanitizer for you and probably your respondent where necessary.

Purpose of the Study: The purpose of the study shall be to establish the effects of teacher collaboration on teacher effectiveness in government aided secondary schools in Iganga District, Uganda. Nonetheless, three collaboration parameters (frequency of collaboration, format of collaboration, and focus of collaboration) will be examined to enable the researcher determine how they influence teacher effectiveness.

Procedure of Study: You have been identified to participate in the study and I wish to ask a few questions regarding the “Teacher Collaboration and Teacher Effectiveness in Selected Government Aided Secondary Schools in Iganga District, Uganda”. Your responses/answers will help us to establish how best we can improve on teacher effectiveness in Iganga Secondary School, Uganda. The responses will be recorded on the questionnaire.

Benefits and Risks: The results of this study will be beneficial to the improve teacher effectiveness in Selected Government Aided Secondary Schools in Iganga District, entire

Busoga region and country at large. There are no anticipated risks as a result of your participation in this study.

Who will participate in the study?: The study will comprise classroom teachers and key informants (including of head teachers, deputy head teachers, district UNATU officials, DEO, Inspector of Schools and D.O.S). At least 25 key informants will be interviewed and about 140 teachers will be asked to fill a questionnaire.

Risks: This study poses no risks to you personally or your institution except for the risk of inconvenience of your time during the interview.

Dissemination of Results: The school administrators may request a copy of the final report for reference and in agreement with the principal investigator may request for a presentation to aid knowledge sharing sessions with the school management, and teachers.

Confidentiality: Your answers will be taken generally as a contribution from one member of the participants. The answers will be treated in confidence and used for purposes of this study only. It is not necessary that you give your name and nobody will be allowed access to the questionnaires used as they will be immediately collected and kept by the principal investigator only. For the purposes of this research study, your comments will not be anonymous. Every effort will be made by the researcher to preserve your confidentiality including the following:

- Assigning code names/numbers for participants that will be used on all research notes and documents

- Keeping notes, interview transcriptions, and any other identifying participant information in a locked file cabinet in the personal possession of the researcher.

Participant data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. These incidents include, but may not be limited to, incidents of abuse and suicide risk.

Voluntary Consent: You are free to choose whether you should take part in this study or not. You will not be persecuted in any way for declining to take part in the study neither will it affect you at work place. We shall only proceed beyond this point if you accept to take part in the study. You are also free to stop at any stage of the study if you feel uncomfortable. If you have any questions about the study now or at any time during the study, you may contact the principal investigator: SEMWANGA MOSES, on Telephone +256772742810.

Contact Information or Questions: If you have questions at any time about this research study, or you have experiences adverse impact as the result of participating in this research, you may contact the investigator whose contact information is provided on this consent. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the Primary Investigator, please contact the Uganda Christian University Research Board on [Tel:+256\(0\)772 405357](tel:+256(0)772405357), Email: pwaiswa@musph.ac.ug and the secretary on [Tel:+256\(0\)775737627](tel:+256(0)775737627), Email: oahimbisibwe@ucu.ac.ug

Voluntary Participation: Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked

to sign a consent form. After signing the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

Statement of Consent

I grant consent that as a teacher selected on account of my knowledge, experience and willingness to communicate my opinions do accept that the information I share during in the questionnaire may be used by SEMWANGA MOSES for research purposes.

The information I share can be freely used by the researcher provided that my privacy will be protected. I understand that by signing this form, I do not waive off my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate.

A copy of this will be provided to me.

Participant’s Name: -----

Participant’s Signature: -----

Researcher’s Name: **SEMWANGA MOSES**

Researcher’s Signature: -----

Date: -----

Appendix 3: Sample Questionnaire

Dear Participant,

My name is Semwanga Moses. I am a postgraduate student at Uganda Christian University. I am conducting a study on “Teacher Collaboration and Teacher Effectiveness in Selected Government-aided Secondary Schools in Iganga District.” The objectives of the study include: establishing the influence of frequency on collaboration on teacher effectiveness, determining the influence of format of collaboration on teacher effectiveness, and assessing the influence of focus of collaboration on teacher effectiveness. You have been identified as one of the valued participants in this survey. Your participation in this study is important to the success of the research since your feedback will provide invaluable insights into understanding the nature of teacher collaboration and using these insights to enhance teacher effectiveness in selected government-aided secondary schools in Iganga District. I therefore request you to take some time, thoughtfully think about the questions herein, and provide frank and honest responses to the questions. The survey should last less than 30 minutes. Your responses will be treated confidentially and used strictly for the purpose of the study. Plus, your participation is entirely voluntary and you are free to choose to withdraw from the study at any time.

Would you like to participate in the study?

1. Yes _____
2. No _____

PART A: BACKGROUND INFORMATION

1.	Name and contact of respondent (optional)	Name: Phone:
2.	Sex	1. Male 2. Female
3.	Age (years)	1. Less than 30 2. 30 – 39 3. 40 – 49 4. 50 and above
4.	Marital Status	1. Married 2. Single 3. Divorced/Separated 4. Widowed
5.	What is your highest academic qualification?	1. PhD 2. Master's degree 3. Bachelor's degree 4. Diploma
6.	How long have you been working as a teacher?	1. Less than 5 years 2. 5 – 14 years 3. 15 – 19 years 4. 20 years and above

PART B: Teacher Effectiveness

Indicate using a tick (√) the extent to which you agree or disagree with the following statements about teacher effectiveness in selected government-aided secondary schools in Iganga District. Your responses should be reflect any option on a scale, where 1=strongly disagree, 2=agree, 3=neutral, 4=agree, and 5=strongly agree.

S/N		1	2	3	4	5
1.	Teachers in my school create a well-coming & inclusive classroom environment before & during teaching					
2.	Teachers in my school establish clear classroom rules before & during teaching					
3.	Teachers in my school use interactive & engaging methods when teaching					
4.	Teachers in my school allow students to engage in free discussion about what they teach					
5.	Teachers in my school effectively communicate learning goals to their students					
6.	Teachers in my school provide timely & constructive feedback that supports learning by students					
7.	Teachers in my school are receptive to feedback from their students & use it to improve their teaching					
8.	Teachers in my school seek opinions from their fellow colleagues and value the feedback they receive					
9.	Teachers in my school are always seeking for opportunities to develop professionally					
10.	Teachers in my school are always seeking for information about current education practices					

PART C: Frequency of Teacher Collaboration

Indicate using a tick (√) the extent to which you agree or disagree with the following statements about teacher effectiveness in selected government-aided secondary schools in Iganga District. Your responses should reflect any option on a scale, where 1=strongly disagree, 2=agree, 3=neutral, 4=agree, and 5=strongly agree.

S/N		1	2	3	4	5
1.	Teachers in my school collaborate with each other on a regular basis					
2.	I am satisfied with the number of times teachers in my school collaborate with each other in a term					
3.	Collaboration among teachers in my school is always an on-going practice					
4.	Consistent collaboration among teachers in my school is part of my school culture					
5.	Teachers in my school take issues of collaboration seriously					
6.	Teachers in my school engage in deeper discussions whenever they are collaborating with each other					
7.	Teachers in my school allocate sufficient time to collaborative activities					
8.	Teachers in my school spare ample time to discuss matters related to working together for the benefit of students					

PART D: Format of Teacher Collaboration

Indicate using a tick (√) the extent to which you agree or disagree with the following statements about teacher effectiveness in selected government-aided secondary schools in Iganga District. Your responses should be reflect any option on a scale, where 1=strongly disagree, 2=agree, 3=neutral, 4=agree, and 5=strongly agree.

S/N		1	2	3	4	5
1.	Peer observation is a common practice of teaching in this school					
2.	Teachers in this school embrace the idea of observing their colleagues when they are teaching in class					
3.	Online collaborations are a common thing in this school					
4.	Teachers in this school embrace the idea of working together using internet based forums					
5.	Co-teaching is a common practice in this school					
6.	Teachers in this school embrace the idea of teaching together with their colleagues in the same class					
7.	Professional learning communities are a common thing in this school					
8.	Teachers is in this school love working together through professional learning communities					

PART E: Focus of Teacher Collaboration

Indicate using a tick (√) the extent to which you agree or disagree with the following statements about teacher effectiveness in selected government-aided secondary schools in Iganga District. Your responses should be reflect any option on a scale, where 1=strongly disagree, 2=agree, 3=neutral, 4=agree, and 5=strongly agree.

S/N		1	2	3	4	5
1.	Teachers in this school collaborate with their colleagues to develop lesson plans are in line with the curriculum standards					
2.	Teachers in this school actively seek input from their colleagues when developing lesson plans					
3.	Working together to design learning & assessment activities is a common practice among teachers in this school					
4.	Teachers in this school work together when setting student exams					
5.	Teachers in this school work together in analyzing student academic performance					
6.	Teachers in this school are open to sharing and receiving feedback from their colleagues about students' academic performance					
7.	Teachers in this school work together to solve classroom challenges					
8.	Teachers in this school feel supported by their colleagues in managing problems of students in classrooms					

Thank you for your time.

Appendix 4: Sample Interview Guide

I am a postgraduate student at Uganda Christian University Mukono. I am conducting a study on “Teacher Collaboration and Teacher Effectiveness in Selected Government-aided Secondary Schools in Iganga District.” The objectives of the study include: establishing the influence of frequency on collaboration on teacher effectiveness, determining the influence of format of collaboration on teacher effectiveness, and assessing the influence of focus of collaboration on teacher effectiveness. You have been identified as a key informant in this study. I therefore request you to take some time, thoughtfully think about the questions herein, and provide frank and honest responses to the questions. The interview should last between 30 to 40 minutes. Your responses will be treated confidentially and used strictly for the purpose of the study. Plus, your participation is entirely voluntary and you are free to choose to withdraw from the study at any time.

Thank you

Would you like to participate in the study?

1. Yes_____

2. No_____

Guiding Questions

1. Comment about the state of teacher effectiveness either in your school or in government-aided secondary schools in Iganga District.
2. Comment about the frequency of teacher collaboration (regularity, consistence, intensity, and duration) in your school or in government-aided secondary schools in Iganga District.
3. Comment about the different ways teachers in your school or in government-aided secondary schools in Iganga District engage in teacher collaboration.
4. Comment about the different motives teachers in your school or in government-aided secondary schools in Iganga District engage in collaborating with one another.
5. How does teacher collaboration influence teacher effectiveness in your school or in government-aided secondary schools in Iganga District?
6. Any other comment about teacher collaboration and teacher effectiveness in your school or in government-aided secondary schools in Iganga District? (Please specify).

Appendix 5: Authorization Letter



UG-REC-026 Approval Version 4.0

19th June, 2023

Semwanga Moses
Uganda Christian University
+256 772742810
Email: semwangamoses@gmail.com

19th June, 2023

UG-REC-026 APPROVAL NOTICE

To: Semwanga Moses, Principal Investigator

Re: UCU-REC Application titled: **Teacher Collaboration and Teacher Effectiveness; A Comparative Study among Selected Government Aided Secondary Schools in Iganga District, Uganda**

Application Number: UCUREC-2023-480-3

Version: 4.0

Type: Initial Review
 Protocol Amendment
 Letter of Amendment (LOA)
 Continuing Review
 Material Transfer Agreement
 Other, Specify:



I am please to inform you that the UG-REC-026; UCUREC approved the above referenced application.

Approval of the research is for the period from 08th June 2023, to 08th June, 2024.

This research is considered minimal risk category.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and additions to the protocol or the consent form must be submitted to the REC for re-review and approval prior to the activation of the changes. The REC application number assigned to the research should be cited in any correspondence.
3. Reports of unanticipated problems involving risks to participants or other must be submitted to the REC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for REC review.

1 of 2

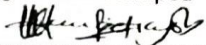
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4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the REC eight weeks prior to the above expiration date of 08th June, 2024 in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. Your research details have been shared with the Executive secretary of Uganda National Council for Science and Technology (UNCST) and you are **not** required to get clearance since you are a Masters Degree research. Refer to UNCST Research registration and clearance Policy and guidelines (July 2016) in Uganda section 6(e).

The following is the list of all documents approved in this application by UG-REC _026:

	Document Title	Language	Version	Version Date
1.	Protocol	English	1.0	2023-06-07
2.	Data collection tools	English	1.0	2023-06-07
3.	Informed Consent forms	English	1.0	2023-06-07
4.	Wok plan	English	1.0	2023-06-07

Signed and Stamped



Prof. Peter Waiswa.
UCUREC Chairperson,
pwaiswa@musph.ac.ug





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SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 10th April 2024

Name of Candidate: Semwanga Moses

Reg. No: RM21MO6/21

Title of Dissertation: Teacher Collaboration and Teacher Effectiveness in Government-aided Secondary Schools in Iganga District, Uganda

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Candidate should ensure that he endorses his dissertation	Dissertation endorsed by the student	Page iii
2	Candidate should ensure that the Supervisor endorses his dissertation	Dissertation endorsed by the Supervisor	Page iv
3	Candidate should ensure that he uses the right nomenclature between School of Education and Faculty of Education in the cover page	School of Education is the right nomenclature and it has been inserted in the cover page	Inside cover page
4	Keep names of schools involved in the study anonymous for ethical purposes	To uphold ethical principle of anonymity, names of selected schools have been removed and replaced with pseudo names	Page 31
5	Follow UCU Master's Degree Dissertation Writing guidelines, e.g., six chapters vs. five chapters	UCU Master's Dissertation Writing Guidelines have been followed. As a result, the report now consists of six chapters after adding an independent chapter on discussion of findings.	Pages 73 - 80
	Should revise table of contents appropriately	Table of contents has been revised appropriately	Pages vii to ix
	Should provide sources of concepts used in the conceptual framework	Sources for concepts used in the conceptual framework have been provided	Page 15
	Chapter three should start on a fresh page	Corrected. Chapter three now starts on a fresh page	Page 29
5	All tables and figures should be presented in acceptable page margins	Corrected. All tables and figures are now presented in acceptable page margins	Pages 15, 36, 37, 41, 42, 44, 54, 58, 60, 64, 67, 68, & 70
	References should begin on a fresh page	Corrected. References start on a fresh page	Page 87
	All references should be written correctly	Corrected. All references are written correctly	Pages 87 - 93

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Problem statement you talk about Ilanga, is the problem. You just need to talk about it in the methodology as a site.	The study problem is confined to Ilanga District. Therefore, it is practically impossible to exclude Ilanga District from the problem statement.	Page 11
2	You need to cite references on teacher effectiveness	Reference on teacher effectiveness is indicated (Kakuba et al., 2021) as well as references to teacher effectiveness indicators (Michael & Kinuthia, 2022; Nombo et al., 2020; Namugaya et al., 2021)	Page 11
3	Which are the other studies about teacher effectiveness that have not reflected on collaboration making them different from this work?	Other studies about teacher effectiveness that have not reflected on collaboration making them different from this work are already indicated (Malunda & Atwebembeire, 2018; Zikanga et al., 2021)	Page 11
4	Need a clear definition of teacher collaboration	A clear definition of teacher collaboration is indicated in the report	Pages 6 - 7
5	How were the variables measured?	The measurement of the variables has been provided for in the report	Pages 32 - 33
6	How did you get the final score of frequency?	Frequency of collaboration is a categorical variable like the other variables. Therefore, the sum total of the items corresponding to this variable represents the total description of frequency of collaboration. The same applies with the other variables.	Chapter Four
7	Pearson's correlation is inadequate. I should have done a regression analysis to get a clearer findings.	Corrected. A regression analysis has been performed.	Page 70
8	Which one is the most important factor?	From the results of regression analysis, frequency of collaboration is the most important predictor of teacher	Page 71

9	I should have used smart PLS for data analysis	<p>effectiveness followed by format of collaboration and focus of collaboration</p> <p>I used bivariate correlation and multiple regression analysis over Smart PLS because the former techniques are more straightforward and easier to interpret, especially because I already have experience with them. Bivariate correlation and multiple regression provide clear and intuitive results that are easy to understand and communicate to others. In contrast, Smart PLS is a complex structural equation modeling technique that may require a steep learning curve and more advanced statistical knowledge to use effectively. Additionally, my research question primarily focuses on exploring relationships between variables rather than complex structural modeling, making bivariate correlation and regression better suited for my analysis.</p>	Pages 58, 64, 68, 70
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Candidate's Name SEMWA NGA MOSES Signature 

Supervisor's Name Dr. Charles Mureesi

Signature 