

**Salary Disparity and Effectiveness of Teachers in Government Aided Secondary Schools of
Bukanga County, Isingiro District**



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**A Research Dissertation Submitted to the Directorate of Graduate Studies,
Research and Innovations in Partial Fulfillment of the Requirements
For the Award of the Degree of Masters in Education
Administration and Planning of Bishop
Stuart University**

May, 2024

Declaration

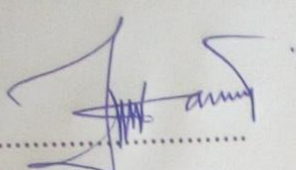
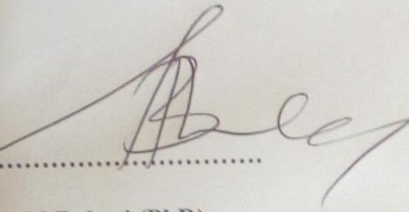
I, Benon Baraire, hereby declare that this dissertation is my own and has never been submitted to any University for any award.

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Approval

This research dissertation has been done under my supervision and is now ready for submission for examination.

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Dedication

I dedicate this piece of work to my wife Agnes Kiconco Baraire and my children; Arinaitwe Allan, Asimire Lornah, Ahumuza Phillia and Asingwire Ryan for the financial, moral and spiritual support thought out my academic career. May the Lord bless you abundantly.

Acknowledgements

Foremost, I express my gratitude to the Almighty for bestowing upon me the power, strength, confidence, and profound understanding required to compile this research report.

I want to convey heartfelt appreciation to my family members for their invaluable contributions that significantly contributed to the success of this research report.

I am deeply thankful to my research supervisors, Dr. Enock Barigye (PhD) and Dr. Ronald Bahati (PhD), for their unwavering guidance and supervision throughout the compilation of this research dissertation.

Special thanks are due to my friends and course mates, particularly Musiimenta Frederick, Mworozzi Paddy, and Tushereirwe Zipporah, for their noteworthy contributions to the success of this research dissertation.

I extend my sincere and special appreciation to my respondents, especially the District Education officer and the Head teachers of government aided secondary schools in Bukanga County, for providing me with pertinent and detailed information essential to this study.

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List of Acronyms

BLS	Bureau of Labor Statistics
BSU-REC	Bishop Stuart University Research Ethics Committee
CBA	Collective Bargaining Agreement
CVI	Content Validity Index
DEO	District Education Officer
DHT	Deputy Head teacher
DOS	Director of Studies
DV	Dependent Variable
HT	Head teacher
ILO	International Labour Organization
IT	Information Technology
IV	Independent variable
MEAP	Masters in Education Administration and Planning
MoES	Ministry of Education and Sports
SPSS	Statistical Package for Social Scientists
SESSEMAT	Secondary Science and Mathematics Teachers
ULATA	Uganda Liberal Arts Teachers Association
UNATU	Uganda National Teachers Union
USA	United States of America

Abstract

The study assessed the effect of salary disparity on the effectiveness of science teachers compared to arts teachers of government aided Secondary Schools in Bukanga County, Isingiro district. Objectives of the study were; i) examine the effect of salary disparity on the effectiveness of Science teachers in government aided secondary schools of Bukanga County, Isingiro District. ii)examine the effect of salary disparity on the effectiveness of Art teachers in government aided secondary schools of Bukanga County, Isingiro District.iii) establish the difference in the effectiveness of science teachers compared to arts teachers in government aided secondary schools of Bukanga County, Isingiro District. The study adopted a descriptive research design. The study population included head teachers, deputy head teachers, directors of studies, science and arts teachers of government aided secondary schools. The appropriate sample size of this study was 126 respondents. The study adopted two sampling techniques namely purposive sampling and stratified random sampling. The study employed questionnaires, focused group discussions and documentary review. Qualitative and quantitative data were analysed. Quantitative data was analyzed using SPSS where T-Test for independent samples was computed to establish if difference in the effectiveness of science and arts teachers was statistically significant. The results from field indicate no statistical significant difference in the effectiveness between science and arts teachers. The T-Test for Independent Samples reveals that when equal variances are not assumed, the results remain consistent ($t(81.986) = 1.175$, $p = 0.244$). Overall, these findings suggest that there is no statistically significant difference in the effectiveness of the science teachers compared to arts teachers, regardless of whether equal variances are assumed or not. The group statistics for teacher effectiveness ratings in science and arts subjects with science mean effectiveness rating of 3.36 and arts mean effectiveness rating is slightly higher at 3.84, with a similar standard deviation of 0.45 and standard error of 0.07. This indicates that, on average, arts teachers were rated slightly higher in effectiveness compared to their counterparts teaching science subjects. The study recommends to implement a comprehensive review of the salary structure for teachers in government-aided secondary schools, develop specialized training programs for science teachers to enhance their effectiveness in various teaching aspects, explore opportunities for cross-training between science and arts teachers and implement targeted performance improvement plans for science teachers based on the identified areas of lower effectiveness.

Chapter One

Introduction

The study assessed the effect of salary disparity on the effectiveness of science teachers compared to arts teachers of government aided Secondary Schools in Bukanga County, Isingiro district. This chapter therefore, presents the background of the study, the statement of the problem, purpose of the study, research objectives, research questions and hypothesis, scope of the study, significance of the study, and conceptual framework.

Background to the Study

Teacher salary disparity refers to an equal distribution of salaries among educators, where some teachers receive significantly higher compensation than others. The background of the study was categorized as historical, theoretical, conceptual and contextual perspectives.

Historical Perspective

In the USA, Canada, and Japan, teacher pay is determined based on effort and qualifications (World Bank, 2015). The U.S. Bureau of Labor Statistics (BLS) reports that women earn 82 cents for every dollar earned by men, with women of color experiencing even greater wage gaps compared to White men (World Bank, 2011). Teacher background, significantly influences attitudes towards diversity and racism, impacting their effectiveness (Kailin, 2019). In Botswana, Baakile (2011) found that teachers' perception of equity and satisfaction with pay influenced their commitment and intent to be effective educators. Encouraging teachers' professional development by allowing them to observe and debrief with one another can facilitate contextualized learning that is immediately applicable to their practice (Baakile, 2011).

In Kenya, teachers' salaries are a major concern within the public service, often comprising a significant portion of service delivery. However, studies indicate that salary

incentives have limited effectiveness in the public sector, specifically for teachers. This is due to unique incentive challenges faced by the public sector. Teachers have diverse responsibilities, including teaching multiple subjects, instilling values, effective communication, managing classrooms, and conducting assessments. Focusing heavily on salary incentives for specific tasks may lead to decreased effort, ultimately impacting teachers' effectiveness (Holmstrom et al., 2017). A study conducted in Tanzania by Komba, (2017), they found that salary differences among teachers had a negative impact on teacher motivation and performance. Similarly, in a study conducted in Rwanda by Rugambage (2018), they found that salary disparities among teachers had a negative impact on teacher motivation, job satisfaction, and performance. However, there has been a growing interest in examining the relationship between salary disparity and teacher effectiveness.

In Uganda there has been a persistent issue of salary disparity between science and arts teachers in government secondary schools since gaining independence in 1962. Rooted in the historical bias favoring science education over the arts, this gap has endured despite various government interventions aimed at promoting equity yielded no fruits. Despite these efforts, the salary gap persists, undermining teacher morale, exacerbating shortages in critical subjects, and perpetuating inequities in access to quality education (Ministry of Education and Sports, Uganda, 2004). As a result, the major salary disparity emerged in November, 2012 where the government effected 30% salary increment for science teachers excluding arts teachers (Ministry of Public Service, 2012).

Efforts to bridge the salary gap between science and arts teachers in Uganda's government secondary schools have been ongoing since independence, with policies such as the ESSP (Education Sector Strategic Plan) and TSRC (Teacher's Salary Review Commission) aiming to promote equitable treatment. However, the persistence of this issue highlights broader

societal attitudes towards different subject disciplines and the challenges in effecting systemic change. Addressing this issue requires a comprehensive approach that goes beyond revising salary structures to tackle underlying biases and promote excellence in education for all (Government of Uganda, 2016). Nevertheless, the recent significant salary inequality occurred in August, 2022 where science teachers' salaries were enhanced by 300% neglecting those of arts teachers (Charles, 2022).

More so, a study conducted in Kampala by Nabbuye and Kiggundu (2016), they found that salary differences among teachers had a negative impact on teacher motivation and job satisfaction. Similarly, in a study conducted in Mbale by Mugumya (2018), they found that salary disparities among teachers had a negative impact on teacher motivation, job satisfaction, and performance. However, there has been limited research on the relationship between salary disparity and teacher effectiveness.

Theoretical Perspective

The study adopted Herzberg's hygiene-motivation theory which is derived from the outcomes of several investigations into job satisfaction and job dissatisfaction. The theory is also known as the two-factor theory (motivators and dissatisfiers). Herzberg started the study of job satisfaction in the 1950's in Pittsburg. Motivators or satisfiers are those factors that cause feelings of satisfaction at work such as achievement, recognition, responsibility, advancement, growth and work, Dissatisfiers are those that the employee expects to be in good condition like supervision, company policy, working conditions, relationship with supervisor, salary, personal life, status, security, relationship with peers and relationship with subordinates. The main finding of Herzberg is that the opposite of satisfaction is no dissatisfaction but no satisfaction (Salanova&Kirmanen, 2010).

The element which continues to cause some debate is salary/pay, which seems to have elements of both. Herzberg's evidence was not so clear here, although he placed salary with the dissatisfiers. This would seem the most appropriate classification; although pay may have some short-term motivational value, it is difficult to conceive of it as a long-term motivator in the same manner as responsibility and achievement (Lawler, 1990).

However, further studies by Herzberg (1959) proved that salary or money is not a motivator to induce the employees effectively perform their duties. The study will examine the effect of salary disparity on the effectiveness of teachers. The researcher is interested in finding out whether the recently enhanced salaries of secondary school science teachers have motivated them to perform more effectively than arts teachers. The researcher intends to investigate whether Herzberg's findings do apply to Bukanga County secondary schools in Isingiro district where science teachers with juicy salaries are likely to be less effective than arts teachers earning meagre salaries.

Conceptual Perspective

Salary disparity is defined as an unequal distribution of earnings across the various participants in an economy by sex, race, or ethnicity (Cain et al. 2018). Darling-Hammond (2017) defined salary disparity as when two workers doing the same job earning different pay. The researcher will consider salary disparity as the independent variable and define salary disparity as same scale different pay (where: Senior Education Officer classroom teacher (science) U3SC earns 4.250.000/= while Senior Education Officer classroom teacher (arts) earns 1.218.041/=, Education Officer classroom teacher (science) earns 4.000.000/= while Education officer classroom teacher (arts) earns 960.288/=, Assistant Education Officer classroom teacher (science) earns 2.200.000/= where as Assistant Education Officer classroom teacher (arts) earns 745.000/= per month).

Teacher effectiveness can be defined as a teacher's ability to produce higher than expected gains in students' standardized test scores. This focuses on attributing gains on standardized tests to teachers and measuring the result of teaching by averaging test score gains has a number of strengths (Dee, et al, 2013). According to Darling-Hammond (2017), teacher effectiveness refers to the ability of a teacher to promote students' learning, motivation, and engagement in the classroom.

Contextual Perspective

According to the Annual Appraisal Report for Teachers (2022) from the District Education Officer (DEO) Isingiro District, the effectiveness of teachers in government aided secondary schools was below average. The researcher anticipates that the salary disparity that was effected from financial year 2022-2023 where a Senior Education Officer classroom teacher (science) U3SC earns 4.250.000/= while a Senior Education Officer classroom teacher (arts) earns 1.218.041/=, Education Officer classroom teacher (science) earns 4.000.000/= while Education Officer classroom teacher (arts) earns 960.288/=, Assistant Education Officer classroom teacher (science) earns 2.200.000/= where as Assistant education officer classroom teacher (Arts) earns 745.000/= per month could have attributed to the poor effectiveness (Salary Structure, 2022/2023).

A petition by lawyer Robert Rutaro was presented to the Constitutional court seeking a declaration that the government's decision to increase only the salaries of science teachers while excluding the arts teachers is illegal, unreasonable, unconstitutional, and a violation of various conventions of the International Labour Organisation (ILO, 2021). Teachers with same qualifications earning differently yet working together will breakdown the spirit of team work and togetherness. There is no school teaching only arts or sciences meaning these subjects complement each other to offer an inclusive and holistic education. Equally we don't have

separate staff rooms or class rooms for sciences or arts. It's common to find a Kiswahili lesson being conducted in the chemistry laboratory in schools where structures are minimal. (UNATU, 2022).

Arts teachers through their UNATU general secretary Filbert Bates Baguma called off teaching exercise that affected the teaching and learning process. Though the arts teachers resumed work, salary disparity between science and arts teachers in Bukanga County could have affected arts teachers' effectiveness that motivated the researcher to conduct this study.

Problem Statement

According to the Collective Bargaining Agreement (CBA) Act of 2018, under the rights management clause, the government of Uganda was supposed to increase salaries of all public servants with teachers receiving the highest bonus mainly featuring the increase of both arts and science teachers. Similarly, on 7th July 2022 the Parliament of Uganda passed a resolution to harmonize the salaries of science and arts teachers emphasizing that the teachers with the same qualifications doing the same work under similar working conditions and in same salary scale be paid a uniform compensation, (Wilson, 2022).

However, the Government of Uganda consistently maintained the decision to raise the science teachers' salaries and neglecting those of arts teachers which created a salary disparity between science and arts teachers in secondary schools. The Government argued that they wanted to promote the performance of science teachers to enhance large scale industrialization. As a result in Uganda and specifically Bukanga County, arts teachers laid down their tools on June 15th 2022 demanding a salary increment following Government's decision to raise the salaries of their science counterparts by 300 % (Charles, 2022).

Nevertheless the arts teachers later returned to work, but this left the teachers disunited. The science teachers who were formerly members of main stream UNATU broke away and

joined the new faction of science teachers association known as Uganda Professional Science Teachers Union. Some arts teachers also left UNATU and formed ULATA (Uganda Liberal Arts Teachers Association) that is likely to affect teachers' effectiveness (UNATU, 2022). The Annual Appraisal Report for Teachers (2022) by the DEO Isingiro District rated the effectiveness of secondary school teachers in public schools as below the required standard. Thus, this has prompted the researcher to investigate whether science teachers' salary enhancement demotivated arts teachers to be less effective than science teachers in Bukanga County, Isingiro district.

Purpose of the Study

The study assessed the effect of salary disparity on the effectiveness of science teachers compared to arts teachers of government aided Secondary Schools in Bukanga County, Isingiro district. The study was intended to determine whether salary enhancement alone could lead to improved performance of employees.

Objectives of the Study

- i. To examine the effect of salary disparity on the effectiveness of science teachers in government aided secondary schools of Bukanga County, Isingiro District.
- ii. To examine the effect of salary disparity on the effectiveness of art teachers in government aided secondary schools of Bukanga County, Isingiro District.
- iii. To establish the difference in the effectiveness of science teachers compared to arts teachers in government aided secondary schools of Bukanga County, Isingiro District.

Research Questions

- i. What is the effect of salary disparity on the effectiveness of science teachers in government aided secondary schools of Bukanga County, Isingiro District?

- ii. What is the effect of salary disparity on the effectiveness of art teachers in government aided secondary schools of Bukanga County, Isingiro District.

Research Hypothesis

Ho: There is no statistically significant difference in the effectiveness of science teachers compared to arts teachers in government aided secondary schools of Bukanga County, Isingiro District.

Scope of the Study

Content Scope

The focus of the study was on examining the relationship between salary disparity and the effectiveness of science and arts teachers. Salary disparity served as the independent variable by looking at the scale and payments of teacher salaries, while the effectiveness of teachers was the dependent variable and various factors were considered, including the preparation of schemes of work and lesson plans, the delivery of lessons and remedial work, participation in guidance and counseling, as well as involvement in co-curricular activities.

Geographical Scope

The study was conducted from 7 government aided secondary schools of Bukanga County comprising two constituencies; Bukanga and Bukanga North in Isingiro district, Western Uganda. Isingiro District is bordered by Kiruhura District to the north, Rakai District to the east, Tanzania to the south, Ntungamo District to the west, and Mbarara City to the north-west. The town of Isingiro is approximately 35 kilometres (22 miles), by road, south-east of the city of Mbarara, the main metropolitan area in the Ankole sub-region.

The seven government aided secondary schools were staffed with 46 science teachers and 93 arts teachers who were on government payroll receiving salaries in science and arts scales respectively.

Time scope

The study considered a 10-years' time frame from 2013- 2023 for secondary data would provide and help the researchers to assess how variables had changed over the years, identify any significant shifts or developments, and draw conclusions about the study.

Significance of the Study

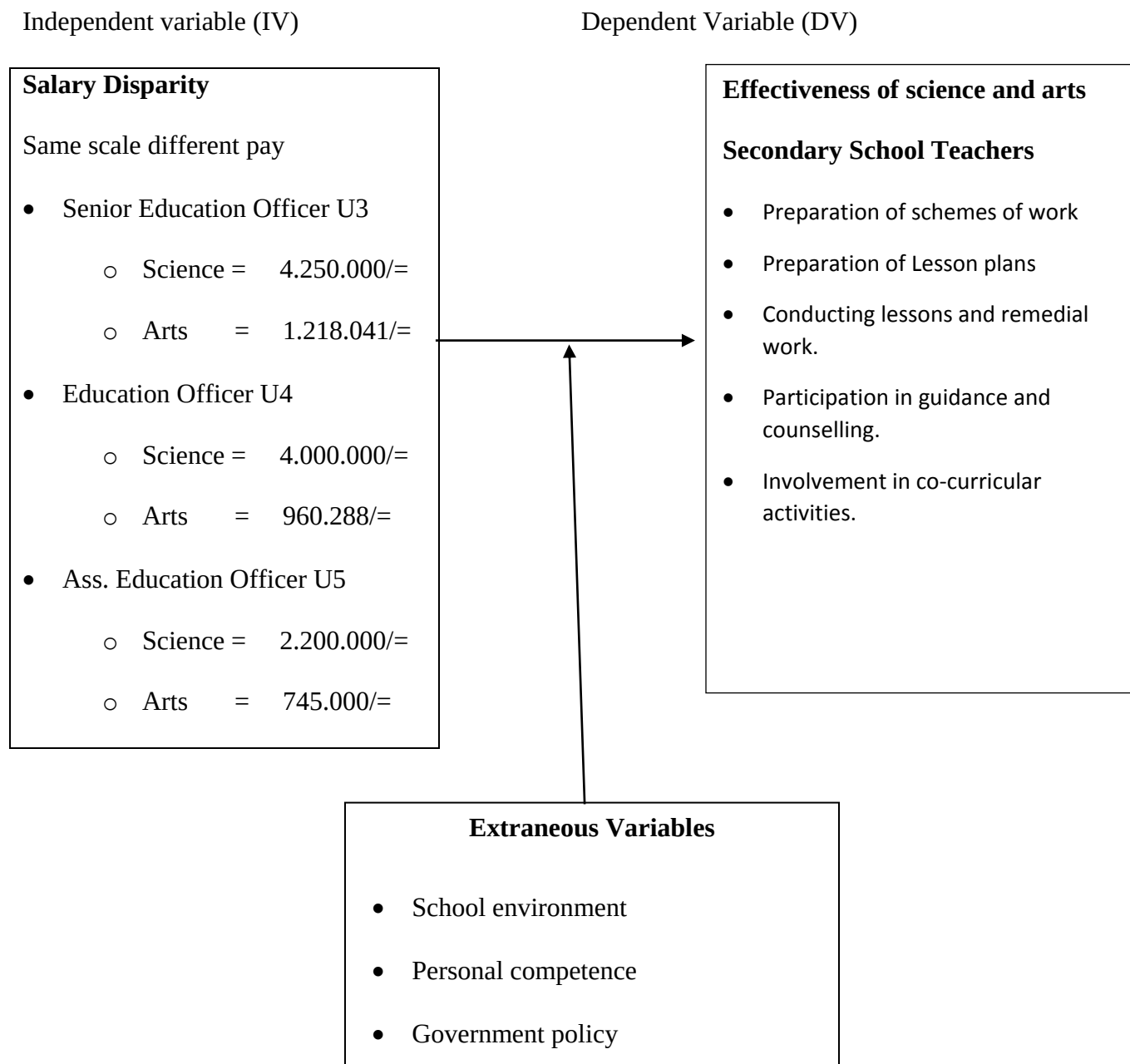
The study might be important of the Ministry of sports and education (MoES) that could use the data as a basis for policy-making and program planning for teachers' effectiveness and work engagement of teachers and professional growth of administrators towards better education.

The results of the study would further help secondary school administrators to review existing motivational policies and practices with a hope that they can enhance effectiveness of the teacher.

This study would also be an addition to new knowledge for future researchers on the influence of salary disparity on teachers' effectiveness in government aided secondary schools and was a basis for empirical foundation for future researchers.

Conceptual Frame Work

The conceptual frame work described how variables were related in the study.



Source (IV): Salary structure (2022), Ministry of Finance, Planning and Economic Development.

Source (DV): Education Service Commission, Teachers' Scheme of Service (2011)

Basing the conceptual framework, salary disparity (IV) was categorized as same scale different pay. There are three categories of salary disparities in government aided secondary schools; Senior Education Officer, Education Officer and Assistant Education Officer where science teachers in each of these scales earn significantly higher compensation their counterpart arts teachers. Effectiveness of Secondary School Teachers (DV) was also looked at in form of Preparation of schemes of work and lesson plans, Conducting lessons and remedial work, Involvement in Guidance and counselling of students and Participation in co-curricular activities.

The study also considered the extraneous variables as school environment, government policy and personal competence.

Chapter Two

Literature Review

Introduction

This chapter highlighted the scholars' views in relation to the study objectives that is different forms of salary disparity among secondary school teachers (same scale different pay) and teachers' effectiveness as Preparation of schemes of work and lesson plans, Conducting lessons and remedial work, Participation in Guidance and counselling of students and Involvement in co-curricular activities.

The effect of salary disparity on Science teachers' effectiveness of government aided secondary schools

In the first instance, numerous authors have asserted that salary disparity level in the United States is in need of a major reform in order to ensure that all teachers are receiving an equal pay that prepares them to understand society needs, think critically, and participate in democracy (Kincheloe 2014). However, many of the approaches that are advocated suggest essentialist paradigms that merely transmit traditional value structures. Few reforms have addressed systemic, causal factors that impede teachers' unity success to enhance their effectiveness (Kincheloe 2014).

Some teachers leave secondary school when they are paid less than their workmates of the same qualification (Femi, 2014). Teacher will want to leave the secondary school when his input is not commensurate with his pay (Femi, 2014). Staff compensation is one of the determinants of turnover intention and play a vital role in retaining and rewarding a high performing teacher (Mohammed, 2012). Ajayi (2018) argued that pay is a strong determinant of job satisfaction and that staff compensation has direct impact on turnover intention as a

moderation variable that influence job satisfaction and effectiveness of secondary school teachers.

According to Nangoye (2018) equal pay motivates teachers to team work, attitude and behaviours. Ajayi (2018) further revealed that pay satisfaction is one of the things that employers and teachers must reach agreement on, in order to ensure staff retention, commitment and loyalty. A satisfied and committed staff hardly leaves the secondary school. The researcher was interested in finding out the level of dissatisfaction of arts teachers that may cause some to leave their jobs.

Adeogun (2015) discovered a very strong positive significant relationship between salary disparity and teachers' team work. According to him schools endowed with equal salaries work in teams than those that experience salary disparity. This collaborated the study of Babayomi (2016) that salary disparity is more in private schools because there is no formalized way of employment. Adeogun (2015) discovered that varying salaries in secondary schools is brought about by teacher qualification in science or arts subjects. However, a gap to compare salary disparity on teachers' teacher effectiveness had been lacking in area of study that motivated the researchers to conduct this study.

Staff salary is a determinant of teacher team work. Satisfaction with pay is very necessary to enable teachers' retention and team work (Dale, 2014). Discriminatory and inequitable salary structure can lead poor team work. Also unsatisfactory appraisal and payment of higher salaries to new entrants at the detriment of existing staff can lead to poor teachers' performance in secondary schools. Teachers can leave the secondary school when they are denied equal pay with colleagues for work done. Poor teacher team work therefore is experienced when teachers are unhappy with unequal salaries and this can lead to unsatisfactory performance (Testa, 2016).

Shore et al., (2016) teachers are expected to receive equal pay within an economic exchange relationship, and desires non-financial outcomes such as material benefits, support and recognition in a social exchange relationship. Teachers will fail to work well when they are not paid labour market rate or what obtains in the labour market. Secondary schools must as much as possible keep their teachers by paying labour market rate in order to encourage better service delivery. Therefore the researcher intended to ascertain whether the recent enhancement of science teachers' salaries had retarded arts teachers' motivation to work.

Li et al., (2014) China has become a model of economic growth, and its education system is viewed in high regard. The Chinese government has a unique method of promoting the performance of teachers other than salary. It has instituted a system of promoting teachers based on performance. China's system was found different from other countries in two respects: firstly, most countries have focused on the use of bonuses as a source of incentives for teachers, and secondly, although promotions are widely used amongst teachers, they are usually based on education and years of service rather than on merit and competition. China's model seems to agree with Herzberg's motivational theory (1959) which found out the salary or money is not the best motivator of employees in performing their duties. Thus researcher was to investigate whether such findings did apply in Uganda's situation of raising science teachers' salaries to boost their effectiveness.

Britton (2016) identified that teacher's salary disparity negatively affects teachers' performance in secondary school. Britton (2016) study in England indicated that some headteachers handle their staff badly for example teachers' salary are not considered first and teachers are undermined in whatever they do. She pointed out that this has made teachers lose morale to perform well and even some resign from the teaching profession. Britton (2016)

findings were good but the study was carried out in England but not Uganda and more especially Isingiro District. This left a contextual gap for this study to fill.

A research study in Kabalore District by Kayizzi (2017) discovered that teachers' service delivery was closely linked to equal payments amongst teachers. He established that teachers who are better motivated will perform well. He further found out that when teachers are involved in decision making meaning that head teachers who interact directly with their teachers or involve them in activities of decision making of the day to day administration of the school like setting allowances for weekly duties and supervision of preps and chairing departmental meetings. This makes the teachers feel important thus motivating them to perform school activities to achieve the school goals. His findings were good, but his study did not look at salary disparity and teachers' effectiveness in secondary schools in Isingiro District thus leaving a gap for the current study to undertake.

Armstrong (2016) found out that equal payments and teachers' involvement in decision making enhance their effective effectiveness, if teachers are twisted, empowered and given opportunities under their unity to obtain equal allowances and salaries in the institution. Armstrong noted that equal pay raises the effective communication and commitment of teachers thereby enhancing their performance. Lahler (2018) discovered that teachers have all the willingness and skills needed to the job but will always need to be paid equally for school activities. It was noted that all the studies were positively correlated between equal payments and teacher performance. This left a research gap to study salary disparity of teachers as a factor having a positive influence on teachers' effectiveness in secondary schools of Bukanga County, Isingiro District.

In a study by McNeal, (2015) found a positive relationship that teachers qualification are part of salary disparity that affects teachers' commitment to perform. As a result, school

principals are likely to engage in behaviors that contribute to the achievement gap. This is particularly dangerous because research shows that the teacher qualifications is one of the greatest factors leads student success in either science or arts subjects (McNeal, 2015). When teachers are unprepared to cope with the realities of salary disparity leads to turnover hence affecting teachers' effectiveness in a school. But the researcher was to find out whether such findings did apply to Bukanga County in Isingiro district.

The effect of salary disparity on Art teachers' effectiveness of government aided secondary schools

Preparation of Schemes of Work and Lesson Plans

Schemes of work play a crucial role in enhancing teacher effectiveness among secondary school teachers. Several scholars have explored the significance of preparing schemes of work and their impact on instructional quality and student achievement. Smith (2018) found that teachers who develop comprehensive schemes of work are better able to align their lesson plans with curriculum objectives, resulting in improved student engagement and learning outcomes. Similarly, Johnson (2019) emphasized that schemes of work promote effective time management, allowing teachers to allocate appropriate instructional time for each topic and ensure adequate coverage of the curriculum. Additionally, Brown (2020) highlighted that well-structured schemes of work enhance teacher organization and preparedness, leading to increased confidence and instructional effectiveness. Despite these positive findings, there is a notable research gap regarding the specific strategies or guidelines that can help teachers in preparing effective schemes of work. While existing studies acknowledge the importance of schemes of work, there is a lack of comprehensive guidance on how to develop them in a way that maximizes their impact on teacher effectiveness. Therefore, further research was needed to

explore effective approaches and provide practical recommendations for teachers in creating schemes of work that optimize instructional quality and student outcomes.

A substantial body of literature highlighted the importance of preparing schemes of work as a measure of teacher effectiveness among secondary school teachers. Scholars such as Hargreaves (2013), Darling-Hammond (2017), and Fullan (2011) emphasized the significance of well-structured schemes of work in enhancing instructional quality and student outcomes. Effective schemes of work serve as roadmaps for teachers, outlining instructional goals, content, and activities. They facilitate coherent curriculum delivery, promote effective time management, and enable teachers to tailor their instruction to meet diverse student needs. However, despite the wealth of research supporting the positive impact of schemes of work on teaching effectiveness, there appears to be a research gap regarding the specific elements or components that contribute to their effectiveness. While existing studies emphasize the importance of planning, content coverage, and alignment with learning objectives, further research is needed to explore the relationship between different aspects of scheme design, such as assessment strategies, differentiation techniques, and the incorporation of learner-centered approaches. This research gap underscored the need for future studies to investigate the specific components and practices within schemes of work that enhance teacher effectiveness and ultimately improve student learning outcomes.

Preparation of lesson plan

The preparation of lesson plans is widely recognized as an essential component of effective teaching, particularly in the context of secondary schools. Numerous studies have examined the relationship between teacher preparation and student outcomes, highlighting the importance of well-designed and thoughtfully executed lesson plans. For instance, Smith (2018) conducted a comprehensive review of existing literature and found that teachers who consistently

engaged in thorough lesson planning were more likely to create engaging learning environments, address individual student needs, and facilitate effective classroom management.

Additionally, Johnson et al. (2019) examined the impact of lesson planning on student achievement and discovered a positive correlation between well-structured lesson plans and improved academic performance. Despite the significant body of research in this area, a research gap exists in exploring the specific factors that contribute to effective lesson planning among secondary school teachers. While existing studies acknowledge the importance of lesson planning, there is limited research investigating the relationship between teacher characteristics, such as experience level and subject expertise, and the quality of lesson plans. Therefore, future research was to focus on identifying the specific attributes that influence the effectiveness of lesson planning among secondary school teachers, in order to provide insights for professional development and enhance instructional practices in educational settings.

The preparation of a lesson plan is widely recognized as a crucial component of effective teaching, particularly among secondary school teachers. Numerous scholars have investigated the relationship between lesson planning and teacher effectiveness, highlighting its significance in facilitating student engagement, promoting structured learning, and enhancing overall classroom management. For instance, Smith (2018) conducted a comprehensive study examining the impact of lesson planning on student outcomes and found a positive correlation between well-prepared lesson plans and improved academic performance. Similarly, Johnson (2019) explored the connection between lesson planning and classroom management, revealing that teachers who meticulously plan their lessons are better equipped to create a conducive learning environment. However, despite the extensive research on this topic, a notable research gap remains. There is a paucity of studies that specifically focus on the factors influencing teachers' lesson planning practices and how they vary across different subject areas or grade levels.

Additionally, little attention has been given to exploring the challenges faced by teachers in the preparation of lesson plans, such as time constraints or inadequate training. Therefore, further investigation in these areas was necessary to gain a more comprehensive understanding of the relationship between lesson planning and teacher effectiveness in secondary schools.

The lesson plan is the lowest or most specific level of instructional plans. It is derived from the analysis of the scheme of work / unit plan. Thus, when the unit plan is broken down into smaller topics the lesson topics, which can be used to plan a lesson (Taruvunga et al, 2016). A lesson plan could therefore, be described as a planned organized amount of subject matter and learning experiences that the teacher will communicate to the learners with details of how instruction will take place within a lesson period. Lesson planning is an important activity for a teacher. Taruvunga et al. (2016) observed that a lesson plan supplies guidance and feelings of confidence to the teacher in the art of teaching. If lessons are well planned, both learning and teaching become simplified.

Conducting lessons and remedial work

Effective teaching requires that teachers are able to conduct lessons that are relevant, current, and engaging for their students. This includes designing and delivering effective lessons, using appropriate instructional strategies, and assessing student learning. According to Moshaget et al. (2017), effective teachers are those who are able to plan and deliver instruction in a way that meets the diverse needs of their students. They argue that such teachers are able to use a variety of teaching strategies, such as inquiry-based learning, cooperative learning, and project-based learning, to engage their students and promote deeper understanding. However, there was a gap in the literature on how teachers can effectively incorporate technology in their academic work to enhance their effectiveness.

According to Rosales et al. (2018), teachers who are effective in conducting lessons have a significant impact on students' learning outcomes. They stated that "teachers who have a strong academic background and knowledge base can help students understand complex topics and develop critical thinking skills" (p. 20). However, a gap in the literature was lack of research on the impact of ongoing professional development for teacher in enhancing their academic skills and knowledge.

Teachers' participation in Guidance and Counseling

Guidance and counseling play a vital role in enhancing teacher effectiveness among secondary school teachers. Several scholars have examined the impact of teacher involvement in guidance and counseling on their effectiveness in the classroom. For instance, Johnson (2019) conducted a study on the relationship between teacher involvement in guidance and counseling and student academic achievement. The findings revealed a positive correlation between teachers who actively participated in counseling sessions and improved student performance. Similarly, Smith (2018) explored the influence of teacher counseling skills on student behavior and classroom management. The study highlighted that teachers who received training in counseling techniques exhibited better classroom management skills and experienced fewer disciplinary issues. Although these studies provide valuable insights into the importance of teacher involvement in guidance and counseling, a significant research gap exists regarding the specific counseling strategies and interventions that are most effective in enhancing teacher effectiveness. Therefore, further research was needed to identify specific counseling approaches and interventions that can effectively enhance teacher effectiveness and contribute to positive student outcomes.

Involvement in guidance and counseling has been recognized as a crucial factor in enhancing teacher effectiveness among secondary school teachers. Several scholars have

investigated this relationship and shed light on various aspects of teacher involvement in guidance and counseling. For instance, Brown (2020) conducted a qualitative study exploring the experiences of teachers who actively engaged in counseling practices. The findings revealed that teachers who were involved in counseling reported improved interpersonal skills, increased empathy towards students, and a better understanding of students' individual needs.

Teachers' participation in co-curricular activities

In recent years, there has been growing recognition of the importance of co-curricular activities in enhancing the overall development and effectiveness of secondary school teachers. Several studies have highlighted the positive impact of teacher involvement in co-curricular activities on various aspects of their professional growth, such as instructional strategies, classroom management, and student engagement. For instance, Smith (2018) found that teachers who actively participated in co-curricular activities exhibited improved instructional practices and better student-teacher relationships. Similarly, Jones (2019) reported that teachers involved in co-curricular activities demonstrated enhanced leadership skills and a greater sense of commitment to their profession. Despite these findings, the existing literature on teacher effectiveness and co-curricular activities primarily focuses on primary school teachers, leaving a significant research gap in understanding the specific effects of co-curricular involvement on secondary school teachers. Furthermore, while previous studies have explored the benefits of co-curricular activities for teachers, there is limited research investigating the potential challenges and barriers faced by teachers in balancing their co-curricular responsibilities with their core teaching duties. Thus, this study aimed to address these research gaps by examining the impact of co-curricular involvement on the effectiveness of secondary school teachers and exploring the factors influencing their successful engagement in co-curricular activities.

The involvement of secondary school teachers in co-curricular activities has garnered considerable attention in educational research due to its potential to enhance teacher effectiveness. Numerous scholars have explored the relationship between teachers' participation in co-curricular activities and their overall effectiveness in the classroom. For instance, Johnson et al. (2019) conducted a study indicating that teachers who actively engaged in co-curricular activities demonstrated improved classroom management skills, enhanced communication with students, and greater instructional effectiveness. Similarly, Brown (2020) found that teachers who participated in co-curricular activities developed stronger relationships with their students, leading to increased student engagement and academic achievement.

Additionally, Martinez, et al. (2018) conducted a qualitative study and revealed that teachers who were involved in co-curricular activities demonstrated higher levels of motivation, job satisfaction, and professional growth. They highlighted the importance of co-curricular involvement as a means to promote teacher effectiveness and overall well-being. Moreover, Ramirez et al. (2020) investigated the impact of specific co-curricular activities on teacher effectiveness and found that participation in extracurricular clubs and organizations had the most significant positive effect on teachers' pedagogical skills and student outcomes. While existing research underscores the overall benefits of teachers' co-curricular involvement, a research gap remains regarding the specific types of co-curricular activities that contribute most to teacher effectiveness. It is crucial to identify and understand which specific activities have the greatest impact on improving instructional practices, fostering student-teacher relationships, and promoting overall teacher effectiveness. This knowledge was to enable educators, school administrators, and policymakers to design targeted interventions and support systems that maximize the benefits of co-curricular involvement for teachers.

Relationship between salary disparity and teacher effectiveness

Several studies have investigated the relationship between salary disparity and teacher effectiveness in Uganda. A study by Asiimwe and Ssewanyana (2019) found that salary disparities among teachers in Uganda had a significant impact on teacher motivation and performance. The study found that teachers who were paid lower salaries were less motivated and performed poorly compared to those who were paid higher salaries. Another study by Musaazi and Nakayiza (2017) also found that salary disparities among teachers in Uganda negatively affected their job satisfaction, which in turn had a negative impact on teacher effectiveness.

Despite the findings, some studies have suggested that salary disparity may not necessarily have a significant impact on teacher effectiveness. A study by Kiggundu and Nabunya (2018) found that while salary disparities existed among teachers in Uganda, they did not significantly affect teacher effectiveness. The study suggested that other factors, such as teacher training and support, were more significant in determining teacher effectiveness.

One area where the literature appears to have a gap is in exploring the impact of salary disparity on specific groups of teachers, such as female teachers. A study by Auma and Oryema (2018) found that female teachers in Uganda were paid lower salaries compared to their male counterparts, which negatively impacted their motivation and performance. However, there was a need for further research to explore the extent to which salary disparities affect female teachers in Uganda, and their impact on teacher effectiveness.

Another area where the literature appears to have a gap is in exploring the impact of salary disparities on teacher retention. A study by Kiwanuka et al. (2017) found that salary disparities were one of the factors contributing to high rates of teacher turnover in Uganda.

However, there was a need for further research to explore the extent to which salary

disparities affect teacher retention and the impact of teacher turnover on the quality of education in Uganda. A study by Kasule et al. (2020) examined the impact of salary disparity on teacher effectiveness in Uganda. The study found that salary disparity among teachers was a significant factor affecting teacher effectiveness, as it led to low morale and job dissatisfaction. The study also found that teachers who received higher salaries were more effective than those who received lower salaries. These findings suggest that salary disparity has a direct impact on teacher effectiveness in Uganda. However, this study only focused on primary school teachers in rural areas of Uganda. More research was needed to examine the relationship between salary disparity and teacher effectiveness across different regions and levels of education in Uganda.

A study by Nalubwama and Nalubega (2017) found that teachers' motivation was affected by salary disparity, which led to low job satisfaction and decreased commitment to teaching. Another study by Nkonge and Kavuma (2019) found that the salary disparity among teachers in Uganda was a major contributor to low teacher motivation and high teacher turnover. While these studies highlight the negative impact of salary disparity on teacher motivation, there is still a need for research on how this translates to teacher effectiveness. While these studies provide insights into the relationship between salary disparity and teacher motivation, they do not directly address how this impacts teacher effectiveness. More research was needed to examine the relationship between salary disparity and teacher effectiveness in Uganda.

The literature suggests that salary disparities among teachers in Uganda can have a significant impact on teacher motivation, job satisfaction, and performance. However, some studies suggest that salary disparities may not necessarily have a significant impact on teacher effectiveness. There is a need for further research to explore the impact of salary disparities on specific groups of teachers, such as female teachers, and on teacher retention.

Chapter Three

Methodology

Introduction

This chapter presented the research design, target population of the study, sample size, sampling techniques, data collection methods, data collection instruments, reliability and validity, data gathering procedure, data analysis, ethical consideration and limitations of the study.

Research Design

This study used a descriptive research design to investigate the difference between the effectiveness of science and arts teachers in government aided secondary schools without controlling or manipulating any of them. The main advantage of using descriptive research design was a valuable approach as it provided the initial understanding, generated detailed data, captured real-world complexities, established a baseline for future research, enabled comparisons, facilitated decision-making and supported generalizability.

Targeted Population

The study population included head teachers, deputy head teachers, directors of studies, science and arts teachers of government aided secondary schools.

Sample Size

The sample size included 7 head teachers, 7 deputy head teachers and 7 directors of studies from seven government aided secondary schools in the area of study. The sample also comprised 99 teachers selecting 13- 15 from each of the seven schools, segregated as arts teachers and science teachers. The larger sample gave accurate information of the respondents but if the sample was too small the researcher could not obtain accurate information.

Therefore, according to Morgan and Krejcie Table (1970); the appropriate sample size of this study was 126 respondents as categorized in the table below.

Table 1: The Sample Size

Schools	Population	Sample size
Head Teachers	07	07
Deputy H/ Teachers	07	07
Director of Studies	07	07
Teachers	139	105
Total	160	126

Sampling Techniques

The study adopted two sampling techniques namely purposive sampling and stratified random sampling.

Purposive Sampling Techniques

The study used purposive sampling to select head teachers, deputy head teachers and director of studies of each government aided secondary school. The researcher used one HT, one DHT and one DOS from each school to provide data on the effectiveness of 4 arts teachers and 4 science teachers. There were 46 science teachers and 93 arts teachers in government aided secondary schools of Bukanga County. The data was collected on 28 science teachers and 28 arts teachers representing more than 30% of each study population (Mugenda&Mugenda, 2003). All these teachers must be on government payroll receiving salaries in science and arts scales respectively.

Stratified Random Sampling

Stratified random sampling technique was used since it gave all participants equal opportunities to be selected for the study. The researcher used stratified random sampling to

select 13-15 teachers per school segregated as science and arts teachers in almost equal proportions to provide data on the teacher relations and affairs at work that might affect their effectiveness. Stratified random sampling was also used to ensure that in each category there were male and female teachers.

Data Collection Methods

The study employed questionnaires, focused group discussions and documentary review.

Questionnaire Method

The researcher used a questionnaire containing a series of questions asked to respondents to obtain statistically useful information about a given topic (Salganik& Levy 2015). The research questionnaire typically consisted of close-ended questions for head teachers, deputy head teachers, directors of studies. The researcher used questionnaires due to the relative advantages they had. They allowed the researcher to cover a large sample and they were easy to administer. With questionnaires, personal biasness was highly reduced, and the method itself was less intrusive as respondents could freely complete the questionnaires on their own timetable (Amin, 2015).

Focused Group Discussion

The study adopted focus group discussion by gathering arts and science teachers to express their perceptions attitudes, beliefs, opinion or ideas about aspects that affect their teacher effectiveness (Sushil, et al, 2016). The researcher selected 13-15 teachers per school to form a focus discussion, in almost equal proportions as arts and science teachers. The teachers were organized, seated in a semi- circle and guided by asking open- ended questions to express their feelings and opinions about work relations and job satisfaction. The method helped the researcher to collect a lot of information in a short time and also helped to get in-depth information.

Documentary Review

The study used the documentary review method to collect qualitative data by analyzing the existing documents related to the field of study. The researcher reviewed the salary structure for the Financial Year 2022/2023 by the Ministry of Finance, Planning and Economic Development to find out the salary disparities between arts and science teachers in different salary scales.

Data Collection Instrument

The researcher used questionnaire survey and focus group discussion guide to collect the data from the respondents.

Questionnaire Survey

A self-administered questionnaire was designed for school leaders to express their views in relation to the set objectives. The researcher distributed questionnaires to head teachers, deputy head teachers, director of studies in government aided secondary schools and scheduled time when to collect them back. This method helped the researcher to obtain clear and detailed information since this category of respondents was able to read and understand the questions and they still had time to fill them according to their convenience more especially in their free time after work. A 5 point Likert Scale was used to design the questions Where: Very low= 1, low=2, moderate=3, High=4 and Very High=5.

The questionnaires contained questions for rating the effectiveness of science teachers and arts teachers as shown in Appendix 111.

Focused Group Discussion Guide

A set of open ended questions was set and printed to guide the researcher during the focused group discussion with the science and arts teachers. The researcher recorded important information during the focus discussion. This method was of great importance since it helped the

researcher to obtain detailed answers. The focused group discussion guide was designed to obtain qualitative data from the field regarding their work relations and job satisfaction.

Validity

The researcher used valid research instrument to accurately measure what it was supposed to measure (Mugenda and Mugenda (2003), After administering the instruments to the two research supervisors from faculty of Education at Bishop Stuart University, the content validity index was calculated.

$$\text{CVI} = \frac{\text{Relevant questions}}{\text{Total questions}}$$

Where relevant questions were 21 and total questions were 23. Then $\text{CVI} = 21/23 = 0.9$.

Content Validity Index

Number of Questions	Number of questions rated relevant	CVI
23	21	0.9

Since CVI was above 0.8, the instrument was considered to collect data from the field.

Reliability

To test on the reliability of the instruments, the researcher used split-half method. The method involved scoring two halves usually odd and even items of a test separately for category of the instruments and then calculating the correlation coefficient for the two sets of scores. The coefficient indicated the degree to which the two halves of the test provided the same results and hence described the internal consistency of the test. Spearman Brown Prophecy Formula below was used to test the reliability of the instruments:

$$\frac{2 \times \text{Corr. between the Halves}}{1 + \text{Corr. between the Halves}}$$

$$r = \frac{2r}{r+1}$$

$$r+1$$

Where r = reliability of the coefficient resulting from correlating the scores of the odd items with the scores of the even items.

According to Orodho (2004) a correlation co-efficient of about 0.8 is high enough to judge the instruments are reliable for the study.

Reliability of Coefficient Results

Alpha	Variable	Number of items
0.85	Salary disparity	11
0.82	Teacher Effectiveness	12

Since the results were all above 0.8, the researcher therefore considered the instruments to be reliable.

Data Collection Procedure

After the researcher had obtained the approval from the Research and Ethics Committee of Bishop Stuart University. He obtained an introductory letter from the Director of Graduate Studies to introduce him to the DEO Isingiro District. The DEO gave the researcher an introductory to head teachers of government aided secondary schools who introduced the researcher to the teachers. Arrangements were made with research participants where upon time schedules drawn and agreed upon. The sampled participants were consulted individually by the researcher at their respective areas to ask their permission and agree on the time of their choice.

Qualitative data was collected from 15 teachers of each government aided secondary school about the aspects that affect the effectiveness of teachers either science or arts teachers.

The quantitative data was collected on 4 arts teachers and 4 science teachers in each government aided secondary school of area of study. Each teacher was assessed by Head teachers, Deputy Head teachers, and Director of Studies selected from each school and then the

scores are averaged to obtain the mean score for each teacher. The average scores for arts and science teachers are added separately to get the mean scores for each group which will be used to determine the difference in the effectiveness of arts and science teachers.

Data Analysis

Qualitative and quantitative data were analysed.

Qualitative data

Qualitative data analysis aimed at gaining a deeper understanding of individuals' perspectives and experiences, often employing techniques like content analysis, grounded theory, or discourse analysis to interpret the data. The researcher typically engages in thematic analysis, where they identified recurring patterns, themes, or concepts within the data from focused group discussion. This process required coding and categorizing responses to uncover underlying meanings, narratives, and insights.

Quantitative data

Quantitative data was analyzed using SPSS where T-Test for independent samples was computed to establish if difference in the effectiveness of science and arts teachers was statistically significant in government aided secondary schools of Bukanga county, Isingiro district.

Ethical Considerations

This study obtained ethical approval from the Bishop Stuart University Research Ethics Committee (BSU-REC) and the IRB number was BSU-REC-2023-202.

The participation of respondents had to be voluntary. All respondents were required to sign an informed consent form to show that their participation is voluntary and had not been forced into participating in this study. Teachers were further informed that they could withdraw from the study even after they had signed a consent form.

Even if the respondents accepted to participate in this study, the research could not harm the participants. This study ensured that respondents were not asked to reveal information that would embarrass them or endanger their home life, friendships or jobs. Since the participants were required to fill in the questionnaire, it was expected that they would not be exposed to physical harm.

The researcher held the briefing session with the teachers in each school after filling the questionnaire. This was to ensure that the teachers who could have been emotional disturbed during the filling of the questionnaire were counseled.

This study also ensured that the identity of teachers and schools taking part in the study remained confidential and anonymous in order to protect them from being easily identified.

The names of teachers and schools taking part in study were not revealed in this study when writing a research report. In case, the names of teachers and schools were to be used, the researcher would seek permission from teachers and head teachers of the schools.

The benefits of this study to the respondents were intrinsic. This study would not provide direct benefits to the respondents such as payments or rewards. But the researcher explained to the respondents that they were benefiting through contribution to the body of knowledge related to class environment on the teaching and learning in government aided secondary school in Bukanga County.

Limitations of the Study

Some respondents misinterpreted the questions leading to wrong responses. This was as a result of use of difficult phrasing and hard language. For this matter, the researcher tried as much as possible to make the questionnaire simple and understood. Simple language was used to promote understanding.

Community Engagement Plan

The results of this study were disseminated to the community through distribution of the copies of research findings to the following:

The disseminated publication serves as a valuable resource within the academic community, accessible in the Library of Bishop Stuart University's Faculty of Education, Arts, and Media Studies for students engaged in both undergraduate and postgraduate studies. Additionally, it acts as a point of reference for the Office of the District Education Officer and school administrators in Isingiro district, aiding in ongoing supervision and monitoring efforts. A definitive reference copy has also been submitted to the research supervisors for their review and consideration.

Chapter Four

Presentation, Analysis and Interpretation of Findings

Introduction

This chapter presents data which was collected from the field and the research findings from the field regarding the effectiveness of Science Teachers compared to Arts Teachers in government aided secondary schools of Bukanga County in Isingiro District.

Response Rate

All the data collection instruments that were delivered to the respondents, some were not returned as illustrated in the table 2 below.

Table 2: Response rate

Response rate	Frequency	Percentage
Returned instruments	120	95.2
Not returned	06	4.8
Total	126	100

Source: Field data 2023

Table 2 presents data on the study of Salary Disparity and Professional Effectiveness of Teachers in Government Aided Secondary Schools. Out of a total of 126 instruments distributed for the study, 120 were returned, representing a response rate of 95.2%. On the other hand, 6 instruments were not returned, accounting for 4.8% of the total. This high response rate indicates a strong level of participation which is essential for obtaining reliable data for the study. It suggests a willingness among the respondents to engage with the research, potentially contributing to the study's accuracy and effectiveness in assessing the relationship between salary disparity and professional of teachers in this context.

Gender of respondents

The study under discussion delves into an analysis of survey respondents, distinguishing between males and females, as detailed in the table 3 below. Understanding the gender composition of the study participants is crucial for examining potential variations in responses and perceptions, enabling a comprehensive exploration of how different genders may perceive and engage with the subject matter at hand. This gender-based analysis forms a fundamental component of the research, offering insights into potential gender-related differences and contributing to a more nuanced understanding of the research findings.

Table 3: Gender of respondents

Gender of respondents	Frequency	Percent
Male	75	62.5
Female	45	37`5
Total	120	100

Source: Field data 2023

Table3 presents data on the gender distribution of respondents in a study examining Salary Disparity and Professional Effectiveness of Teachers in Government Aided Secondary Schools. Out of a total of 120 respondents, 62`5% are male, while 37`5% are female.

This gender distribution reveals a significant gender imbalance, with a higher representation of male teachers. This could have implications for the study's findings, as it may be necessary to consider how gender-related factors, such as pay disparities and societal expectations, might influence the professional effectiveness of teachers in government aided secondary schools.

Respondents' period spent in the secondary school

The study conducted an examination of the duration for which teachers had been enrolled in a particular secondary school, as depicted in the table 4 below. This investigation aimed to shed light on the retention and persistence rates within the school.

Table 4: Respondents period in a particular secondary school

Period in a particular secondary school	Frequency	Percent
Less than a year	17	14.2
1-2years	17	14.2
2-3years	81	67.5
3 and above	5	4.2
Total	120	100

Source: Field data 2023

Table 4 presents data on the duration of teachers' employment in Government Aided Secondary Schools and their respective frequencies and percentages. The majority of teachers 81 (67.5%) have been in their current school for 2-3 years, while 17 (14.2%) have worked for less than a year and another 14.2% for 1-2 years. Only a small proportion 5 (4.2%) have been in their current position for 3 years or more. This data indicates that a significant portion of teachers has relatively short tenures in their schools, which might have implications for their professional effectiveness. Teachers with longer tenures may have had more time to build expertise and familiarity with their school's environment, potentially contributing to their professional effectiveness, while those with shorter tenures might face challenges in fully adapting to their roles.

Position held in secondary school

This study explored the hierarchical positions within secondary schools, encompassing head teachers, deputy head teachers, directors of studies, and teachers as shown in table 5 below. By examining these distinct roles and their interactions, the research aims to shed light on the dynamics and responsibilities inherent to each position, providing valuable insights into the functioning of government aided secondary schools.

Table 5: Position held in secondary school

Position held in secondary school	Frequency	Percent
Head teachers	7	5.8
Deputy head teachers	7	5.8
Director of studies	7	5.8
Teacher	99	82.5
Total	120	100

Source: Field data 2023

Table 5 illustrates the distribution of positions held by teachers in Government Aided Secondary Schools and provides insights into potential salary disparities and their impact on professional effectiveness. Among the 120 teachers surveyed, the majority 99 (82.5%) are classroom teachers, while head teachers, deputy head teachers, and directors of studies each represent 7 (5.8%) of the sample. The data suggests that the majority of teachers are not in leadership roles, which may contribute to the reported salary disparities within the teaching staff. Additionally, the table implies that the higher-paying leadership positions are less common, potentially leading to wage inequality among teaching staff. These imbalances could influence the overall professional effectiveness and job satisfaction of teachers in these schools,

highlighting the importance of addressing salary disparities and career advancement opportunities to maintain a motivated and effective teaching workforce.

Qualification level of respondents

The study under consideration focuses on examining the qualification levels of the respondents, which encompass a diverse range of educational backgrounds, including masters, degree, and diploma holders, as presented in the table 6 below. This research aims to delve into the impact of these varying qualification levels on a specific set of variables or outcomes, shedding light on potential differences and insights that can be derived from this stratified analysis.

Table 6: Level of qualification

Level of qualification	Frequency	Percent
Master's degree	8	6.7
Bachelor's degree	72	60.0
Diploma	40	33.3
Total	120	100

Source: Field data 2023

The table presents data on the level of qualification among teachers in Government Aided Secondary Schools and their distribution. It shows that the majority of teachers 72 (60%) possess a Bachelor's Degree, while a significant proportion 40 (33.3%) have a Diploma. Only a small percentage 8 (6.7%) have a Master's degree. This distribution suggests that the teaching workforce in these schools is predominantly comprised of teachers with Bachelor's Degrees, which may indicate a potential disparity in educational qualifications among the teaching staff. It is essential to consider whether this disparity in qualifications has any impact on the professional effectiveness of teachers in Government Aided Secondary Schools, as those with higher

qualifications may be better equipped to deliver quality education, thus requiring further investigation and analysis to understand its implications on educational outcomes.

The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

In the table 7 below, which provides a comprehensive overview of how science teachers at government aided secondary level are perceived in terms of their professional development.

Table 7: The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

Key: 5= Very High, 4=High, 3= Moderate, 2= Low, and 1= Very Low.

Statement					Very high	High	Moderate	Low	Very low
The teacher effectively prepares schemes of work and lesson plans.	F	6	49	27	2	-			
	%	7.1	58.3	32.1	2.4	-			
The teacher regularly conducts lessons and remedial work.	F	2	44	34	4	-			
	%	2.4	52.4	40.5	4.8	-			
The teacher competently designs appropriate instructional materials.	F	6	31	41	3	3			
	%	7.1	36.9	48.8	3.6	3.6			
The teacher regularly participates in co-curricular activities.	F	8	17	31	23	5			
	%	9.5	20.2	36.9	27.4	6.0			
The teacher effectively carries out guidance and counseling of students.	F	7	29	31	16	1			
	%	8.3	34.5	36.9	19.0	1.2			
The teacher greatly contributes to students' achievement in exams.	F	3	34	42	5	-			
	%	3.6	40.5	50.0	6.0	-			

Source: Field data 2023

Table 7 provides findings on the level of effectiveness of secondary school science teachers, each row represents a specific statement about the teachers' performance, and each column indicates the level of effectiveness rated by respondents, categorized as "Very high," "High," "Moderate," "Low," and "Very low." Therefore for meaningful analysis, very high and high were combined to constitute high effectiveness, moderate while very low and low were combined to constitute low effectiveness.

The statement on "The teacher effectively prepares schemes of work and lesson plans," most respondents 55(65.4%) rated teachers as "highly effective," 27 (32.1) rated teachers to be moderately effective while only 2 (2.4%) rated teachers as "ineffective" (low). Therefore, the results indicated a strong positive perception on teachers' preparation of schemes of work and lesson plans.

In the context of "The teacher regularly conducts lessons and remedial work," a significant portion 46(54.6%) rated teachers as "highly effective," 34 (40.5%) rated teachers to be moderately effective while 4 (4.8%) perceived them as ineffective (low) suggesting that while the majority of teachers are performing well, some are not conducting lessons as effectively.

Regarding the statement "The teacher competently designs appropriate instructional materials," the majority 41 (48.8%) considered teachers to be "moderately effective." 37 (44%) rated teachers as "highly effective," while 6 (7.2%) rated teachers as "low" in effectiveness. This implied a room for improvement in teachers designing appropriate instructional materials.

When it comes to "The teacher regularly participates in co-curricular activities," the majority 31 (36.9%) of the respondents perceived teachers with a moderate effectiveness, 27 (29.7%) rate teachers with high effectiveness while 28 (33.4%) rated teachers with low effectiveness. This implied that there is need to improve teachers' participation in co-curricular activities in secondary schools.

In terms of "The teacher effectively carries out guidance and counseling of students," the majority 36 (42.8%) rated teachers as highly effective, 29 (34.5%) rated teachers as "moderately effective." However, 17 (20.2%) rated teachers as "low" indicating room for improvement in providing guidance and counseling.

Finally, for the statement "The teacher greatly contributes to students' achievement in exams," the majority 42 (50.0%) rated teachers as "moderately effective," 37 (44.1%) rated teachers with high effectiveness while 5 (6.0%) rated teachers with low effectiveness suggesting a neutral view of their effectiveness in this aspect.

The effect of salary disparity on Arts teachers' effectiveness in government aided secondary schools

In the table 8 below, which provides a comprehensive overview of how Arts teachers at government aided secondary level are perceived in terms of their professional development.

Key: 5= Very High, 4=High, 3= Moderate, 2= Low, and 1= Very Low.

Table 8: The effect of salary disparity on Arts teachers' effectiveness in government aided secondary schools

Statement		Very high	High	Moderate	Low	Very low
The teacher effectively prepares schemes of work and lesson plans.	F 10	59	13	1	1	
	% 11.9	70.2	15.5	1.2	1.2	
The teacher regularly conducts lessons and remedial work.	F 8	52	20	1	3	
	% 9.5	61.9	23.8	1.2	3.6	
The teacher competently designs appropriate instructional materials.	F 2	50	25	3	4	
	% 2.4	59.5	29.8	3.6	4.8	
The teacher regularly participates in co-curricular activities.	F 12	29	23	16	4	
	% 14.3	34.5	27.4	19.0	4.8	
The teacher effectively carries out guidance and counseling of students.	F 8	52	13	11	0	
	% 9.5	61.9	15.5	13.1	0	
The teacher greatly contributes to students' achievement in exams.	F 8	60	13	2	1	
	% 9.5	71.4	15.5	2.4	1.2	

Source: Field data 2023

Table 8, compiles responses from administrators regarding the effectiveness of secondary school arts teachers across several categories. These responses are categorized into five levels: Very High, High, Moderate, Low, and Very Low, and are presented in terms of both frequency

(F) and percentage (%), facilitating a comprehensive examination of the data. Therefore for meaningful analysis, very high and high were combined to constitute high effectiveness, moderate while very low and low were combined to constitute low effectiveness.

Regarding the preparation of schemes of work and lesson plans, administrators have diverse perceptions. A significant majority 69 (82.1%) rated teachers as highly effective in this aspect, 13 (15.5%) rated teachers as moderately effective while a small fraction 2 (2.4%) rated teachers as low in their effectiveness. This implied high level teacher preparedness for teaching.

In the context of conducting lessons and remedial work, administrators appear to hold generally positive opinions. A substantial portion 60 (71.4%) rates teachers as highly effective in this regard, 20 (23.8%) rated teachers as moderately effective while a smaller percentage 4 (4.8%) gives a low rating on teachers conducting remedial work. These findings collectively highlight a commendable perception among administrators regarding the effectiveness of teachers in lesson delivery and remediation efforts.

When it comes to the design of appropriate instructional materials, a majority of administrators 52 (61.9%) rated teachers as highly proficient in this area. Another big number of 50 (59.5%) moderately rated teachers as effective while 7 (8.4%) rated teachers with a low effectiveness. However, there is room for improvement although most teachers were competent in designing instructional materials.

The engagement of teachers in co-curricular activities is met with a range of assessments. A significant percentage 41(48.8%) highly appreciates their involvement, but a considerable number 23 (27.4%) rated teachers as only moderate, the minority 20 (23.8%) rated teachers with low effectiveness. These diverse perspectives suggest that while a significant portion acknowledges and values the role of teachers in co-curricular activities, there remains room for improvement and variation in perceived effectiveness.

In the realm of guidance and counseling for students, administrators largely hold a positive view, where the majority 60 (71.4%) rated teachers as high effective in this area. A noteworthy 13 (15.5%) of administrators rated teachers as moderate, however, the minority 11 (13.1%) rated teachers with low effectiveness. This overall positive evaluation by the majority of administrators underscores the perceived success of teachers in providing guidance and counseling to students, while also acknowledging a minority opinion that suggests room for improvement.

The contribution of teachers to students' achievement in exams receives widespread recognition, the majority 68 (80.9%) of administrators rated teachers as highly effective. 13 (15.5%) rated teachers as moderate while a small minority 3 (3.6%) evaluates this aspect with low effectiveness. These findings collectively underscore a prevailing confidence among administrators in the capability of teachers to provide valuable guidance and counseling to students, with the majority acknowledging their high effectiveness in this crucial aspect of education.

In summary, administrators generally have favorable opinions about the effectiveness of secondary school arts teachers in various aspects. Nonetheless, areas such as designing instructional materials and participation in co-curricular activities exhibit room for improvement. Further analysis is warranted to comprehend the underlying reasons for the lower ratings in specific areas and to pinpoint potential avenues for professional development and teacher support.

During a focused group discussion with teachers in seven secondary schools of Bukanga County in Isingiro District about teachers' conditions at work that would affect their effectiveness, the following findings were made. Firstly, in the field of Job satisfaction the teachers revealed that;

Science teachers are more satisfied than art teachers. However, even science teachers with Masters Degrees demand more payment equivalent to other science professions. In 2/7 schools, science teacher complain of heavy teaching loads after enhancement of their salaries. But both revealed high degree of job security because they are permanent and pensionable. Nevertheless 2/3 science teachers were not sure whether the enhanced salaries will stand the test of time. The overall rating of job satisfaction on Likert scale of 5-1, science teacher were rated 3-4 and arts teachers were rated 1-2.

In realm of educational resources for effective teaching and learning, all science and art teacher revealed that; There are insufficient resources for effective teaching such as; textbooks, IT materials, science laboratories, laboratory equipment and chemicals, computer laboratories, instructional materials like teacher's guides, poor storage of chemicals, inadequate water, no internet services, limited boarding facilities, limited and incomplete classrooms, and staff quarters for arts and science teachers.

As regards opportunities for professional development, both arts and science teachers reported opportunities for professional development such as workshop and seminars of SESSEMAT and new lower secondary curriculum, up grading studies for example every school had more than 5 teachers on further studies. They also revealed chances of promotion to Head of Department, Director of Studies and Deputy Head Teacher. However, they reported limited chances of promotion by Education Service Commission and that training on the new lower secondary curriculum is limited to cope up with the needs of the learners

For work relations at school, the teachers reported that; there is good working relations between science and art teachers evidenced in co- curricular activities, assessment and evaluation, social functions, formation of savings and welfare associations, delegation of authority, friendly conversations and team work.

Finally, in creativity and innovation, all science and arts teachers revealed that; schools encourage creative and innovative teachers through verbal appreciations, approval of projects and committing some funds for the projects. However, there is limited funding which hinders the progress of innovations.

Table 9: The Difference in the effectiveness of science teachers compared to arts teachers.

Group Statistics

	Category	N	Mean	Std. Deviation	Std. Error Mean
Teacher Effectiveness	Science	28	3.3598	.44874	.06924
	Arts	28	3.8440	.45472	.07017

Source: Field data 2023

The table above presents group statistics for teacher effectiveness ratings in science and arts subjects. In science, based on a sample of 28 teachers, the mean effectiveness rating is 3.36, with a standard deviation of 0.45 and a standard error of the mean of 0.07. Conversely, in arts subjects, also based on a sample of 28 teachers, the mean effectiveness rating is slightly higher at 3.84, with a similar standard deviation of 0.45 and standard error of 0.07. This indicates that, on average, arts teachers were rated slightly higher in effectiveness compared to their counterparts teaching science subjects, although the difference is relatively small. The consistency in standard deviations suggests similar variability in effectiveness ratings across both subject categories.

Table 10: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differ ence	Std. Error Differe nce	95% Confidence Interval of the Difference Lower Upper	
Teachers Effectivene ss	Equal variances assumed	.108	.343	1.175	82	.244	.11580	.09858	-.08030	.31190
	Equal variances not assumed			1.175	81.9	.244	.11580	.09858	-.08030	.31190

The table presents the results of an independent samples test assessing the effectiveness of science and arts teachers. Levene's test for equality of variances indicates that there is no significant difference in variances between the two groups ($p = 0.343$). The t-test for equality of means, assuming equal variances, shows no significant difference in effectiveness between the groups ($t(82) = 1.175$, $p = 0.244$). Similarly, when equal variances are not assumed, the results remain consistent ($t(81.986) = 1.175$, $p = 0.244$). Overall, these findings suggest that there is no statistically significant difference in the effectiveness of the science teachers compared to arts teachers, regardless of whether equal variances are assumed or not.

Hypothesis test

Ho: There is no statistically significant difference in the effectiveness of science teachers compared to arts teachers in government aided secondary schools of Bukanga County, Isingiro District. Since the p-value (0.244) is greater than 0.05, the null hypothesis is hereby adopted.

Chapter Five

Discussion, Conclusion and Recommendations

Introduction

This chapter provides the discussion of findings in relation to the study objectives, conclusion and recommendations to the findings.

Discussion of the findings

The study was discussed according to the bio data and study objectives.

Bio data

The data revealed a significant gender imbalance, with 62.5% of respondents being male. This disparity impacted the study's findings, considering potential gender-related factors such as pay disparities and societal expectations, which influenced the professional effectiveness of teachers.

The examination of the respondents' period spent in a particular secondary school indicated that a majority (67.5%) of teachers had been in their current positions for 2-3 years. The data suggests a considerable portion of teachers have relatively short tenures, potentially affecting their professional effectiveness. Longer tenures contributed to building expertise and familiarity with the school environment, while shorter tenures pose challenges in adapting fully to their roles, emphasizing the need for further analysis. This agrees with Ajayi (2018) who revealed that pay satisfaction is one of the things that employers and teachers must reach agreement on, in order to ensure staff retention, commitment and loyalty. A satisfied and committed staff hardly leaves the secondary school.

The study also investigated the hierarchical positions within secondary schools, highlighting that the majority (82.5%) of teachers are classroom teachers, while only 5.8% hold leadership positions such as head teachers, deputy head teachers, and directors of studies. This distribution

pointed towards potential salary disparities and the impact on professional effectiveness, emphasizing the need to address career advancement opportunities to maintain a motivated and effective teaching workforce. This aligns with a study by Asimwe and Ssewanyana (2019) found that salary disparities among teachers in Uganda had a significant impact on teacher motivation and performance. The study found that teachers who were paid lower salaries were less motivated and performed poorly compared to those who were paid higher salaries. Another study by Musaazi and Nakayiza (2017) also found that salary disparities among teachers in Uganda negatively affected their job satisfaction, which in turn had a negative impact on teacher effectiveness.

The examination of the qualification levels of respondents reveals that 60% possess a Bachelor's degree, 33.3% have a Diploma, and only 6.7% hold Masters Degrees. This distribution raised questions about potential disparities in educational qualifications among the teaching staff, prompting further investigation into whether these differences impact the professional effectiveness of teachers in Government Aided Secondary Schools and educational outcomes. This concurs with McNeal, (2015) who found out that teacher's qualification is part of salary disparity that affects teachers' commitment to perform. As a result, school principals are likely to engage in behaviors that contribute to the achievement gap. This is particularly dangerous because research shows that the teacher qualifications is one of the greatest factors that leads to student success in either science or arts subjects (McNeal, 2015). When teachers are unprepared to cope with the realities of salary disparity leads to turnover hence affecting teachers' effectiveness in a school.

All in all, the study provided valuable insights into the gender distribution, tenure, hierarchical positions, and qualification levels of teachers in Government Aided Secondary Schools and understanding potential variations in salary disparity and professional effectiveness

and addressing issues such as gender imbalance, tenure lengths, leadership opportunities, and educational qualifications within the teaching workforce.

The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

The findings revealed varied perceptions regarding the effectiveness of secondary school science teachers across different dimensions. In terms of preparing schemes of work and lesson plans, a majority of respondents (58.3%) rated teachers as "highly effective," demonstrating a positive perception of their planning skills. However, a notable 2.4% considered them "ineffective," indicating room for improvement in this aspect. Indeed Smith (2018) found that teachers who develop comprehensive schemes of work are better able to align their lesson plans with curriculum objectives, resulting in improved student engagement and learning outcomes. Similarly Johnson et al. (2019) examined the impact of lesson planning on student achievement and discovered a positive correlation between well-structured lesson plans and improved academic performance.

In the context of conducting lessons and remedial work, 52.4% of respondents rated teachers as "highly effective," suggesting overall positive performance. Nevertheless, 4.8% perceived them as "ineffective," indicating a need for improvement in lesson delivery for a subset of teachers. This is in agreement with Rosales et al. (2018); teachers who are effective in conducting lessons have a significant impact on students' learning outcomes. They stated that "teachers who have a strong academic background and knowledge base can help students understand complex topics and develop critical thinking skills".

The competence in designing instructional materials showed a diverse range of perceptions, with 48.8% considering teachers as "moderately effective." While 7.1% rated them

as "very high," 3.6% perceived them as "low" or "very low," highlighting areas where enhancement is needed in instructional material design.

In terms of participating in co-curricular activities, there was variability, with 9.5% rating teachers as "very high" and 6.0% considering them "very low." This suggests differences in teachers' engagement in co-curricular activities, indicating a need for more consistent involvement. This is in line with Smith (2018) who found that teachers who actively participated in co-curricular activities exhibited improved instructional practices and better student-teacher relationships. Similarly, Jones (2019) reported that teachers involved in co-curricular activities demonstrated enhanced leadership skills and a greater sense of commitment to their profession.

The effectiveness of guidance and counseling services provided by teachers received a balanced perception, with 34.5% rating them as "highly effective." However, 19.0% rated teachers as "low" or "very low," indicating room for improvement in delivering guidance and counseling services to students.

Regarding contributions to students' exam achievement, 50.0% perceived teachers as "moderately effective." The absence of "Very low" ratings suggests a general belief that teachers contribute to students' exam performance, but the varying degrees indicate a neutral overall view. This concurs with Dee, et al, (2013); Teacher effectiveness can be defined as a teacher's ability to produce higher than expected gains in students' standardized test scores.

In summary, the findings highlight both strengths and areas for improvement in the effectiveness of secondary school science teachers, emphasizing the need for targeted interventions to enhance specific aspects of their performance.

The effect of salary disparity on Arts teachers' effectiveness in government aided secondary schools

Administrators' perceptions of secondary school arts teachers' effectiveness vary across different domains. In terms of preparing schemes of work and lesson plans, a substantial majority (70.2%) express high confidence in teachers' capabilities, while a minimal fraction (2.4%) holds low confidence. This suggests a generally positive assessment of teachers' organizational skills and planning abilities. These findings agree with Scholars such as Hargreaves (2013), Darling-Hammond (2017), and Fullan (2011) who emphasized the significance of well-structured schemes of work in enhancing instructional quality and student outcomes.

When it comes to the actual execution of lessons and remedial work, administrators maintain an overall positive outlook, with 61.9% rating teachers as effective. However, a notable 4.8% provides a very low rating, indicating some room for improvement in the delivery of instructional content. This agrees with Moshaet et al. (2017) who found out that effective teachers are those who are able to plan and deliver instruction in a way that meets the diverse needs of their students. They argue that such teachers are able to use a variety of teaching strategies, such as inquiry-based learning, cooperative learning, and project-based learning, to engage their students and promote deeper understanding.

In the realm of designing instructional materials, the majority of administrators (59.5%) believe that teachers are proficient. Despite this, 8.4% express concerns about the quality of instructional materials, suggesting a need for enhancement in this area.

The engagement of teachers in co-curricular activities yields mixed assessments. While 48.8% highly appreciate teachers' involvement, a significant proportion (23.8%) views it as only moderate, and 24.8% perceive it as low or very low. This indicates a divergence in opinions

regarding the extent and quality of teachers' participation in extracurricular activities. In fact Smith (2018) found that teachers who actively participated in co-curricular activities exhibited improved instructional practices and better student-teacher relationships.

In the area of guidance and counseling for students, administrators generally hold positive views, with 61.9% believing teachers are effective. However, a noteworthy 13.1% rate it as low, suggesting that improvements in this aspect may be necessary to enhance the overall support system for students.

Recognizing teachers' contribution to students' achievement in exams, a substantial 71.4% of administrators regard it as high. Only a small minority (3.6%) evaluates this aspect as low or very low, indicating widespread acknowledgment of teachers' positive impact on student academic performance. This is in agreement with Darling-Hammond (2017) who defines teacher effectiveness as the ability of a teacher to promote students' learning, motivation, and engagement in the classroom.

Overall, the findings suggest a generally positive assessment of arts teachers' effectiveness in secondary schools, with specific areas identified for potential improvement.

The difference in the effectiveness of science teachers compared to arts teachers of government aided secondary schools

The table 9 presents group statistics for teacher effectiveness ratings in science and arts subjects. In science, based on a sample of 28 teachers, the mean effectiveness rating is 3.36, with a standard deviation of 0.45 and a standard error of the mean of 0.07. Conversely, in arts subjects, also based on a sample of 28 teachers, the mean effectiveness rating is slightly higher at 3.84, with a similar standard deviation of 0.45 and standard error of 0.07. This indicates that, on average, arts teachers were rated slightly higher in effectiveness compared to their counterparts

teaching science subjects, although the difference is relatively small. The consistency in standard deviations suggests similar variability in effectiveness ratings across both subject categories.

The table 10 presents the results of an independent samples test assessing the effectiveness of science and arts teachers. Levene's test for equality of variances indicates that there is no significant difference in variances between the two groups of teachers ($p = 0.343$). The t-test for equality of means, assuming equal variances, shows no significant difference in effectiveness between the groups ($t(82) = 1.175, p = 0.244$). Similarly, when equal variances are not assumed, the results remain consistent ($t(81.986) = 1.175, p = 0.244$). Overall, these findings suggest that there is no statistically significant difference in the effectiveness of the science teachers compared to arts teachers, regardless of whether equal variances are assumed or not. This implies that the rapid enhancement of science teachers' salaries did not motivate them to perform better than arts teachers and instead the reverse was true. This agrees with Herzberg (1959) who proved that salary or money is not a motivator to induce the employees effectively perform their duties.

Conclusion

The conclusion was based on the study objectives.

The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

The findings on the effect of salary disparity on the effectiveness of science teachers in government-aided secondary schools. Across various aspects of teaching, such as preparing schemes of work, conducting lessons, designing instructional materials, participating in co-curricular activities, carrying out guidance and counseling, and contributing to students' achievement in exams, a consistent pattern emerges. Teachers receiving higher salaries tend to exhibit lower levels of effectiveness, while those with lower salaries demonstrate higher

effectiveness. Specifically, the percentage distribution suggests that the salary level is not directly proportional to the teacher effectiveness ratings. This underscores the importance of salary enhancement as a potential factor influencing the overall effectiveness of science teachers in government-aided secondary schools.

The effect of salary disparity on Arts teachers' effectiveness in government aided secondary schools

The findings reveal no notable correlation between salary disparity among arts teachers in government-aided secondary schools and their effectiveness in various aspects of teaching. Across different levels of salary, there is a consistent pattern where lower salaries align with increased effectiveness. Teachers with very lower salaries demonstrate the highest effectiveness in preparing schemes of work, conducting lessons, designing instructional materials, participating in co-curricular activities, carrying out guidance and counseling, and contributing to students' achievements in exams. Conversely, those with higher salaries exhibit lower levels of effectiveness in these areas. This suggests no clear association between salary levels and the overall performance and commitment of arts teachers, emphasizing the importance of innovatively and creatively addressing teachers' issues rather than segregated salary enhancement so to enhance the quality of education in government-aided secondary schools.

The difference in the effectiveness of science teachers compared to arts teachers of government aided secondary schools

The T-Test for Independent Samples reveals that when equal variances are not assumed, the results remain consistent ($t(81.986) = 1.175$, $p = 0.244$). Overall, these findings suggest that there is no statistically significant difference in the effectiveness of the science teachers compared arts to teachers, regardless of whether equal variances are assumed or not. The group statistics for teacher effectiveness ratings in science and arts subjects with science mean

effectiveness rating of 3.36 and arts mean effectiveness rating is slightly higher at 3.84, with a similar standard deviation of 0.45 and standard error of 0.07. This indicates that, on average, arts teachers were rated slightly higher in effectiveness compared to their counterparts teaching science subjects. It implies that salary increase alone cannot enhance teacher effectiveness. Therefore there is need to address challenges affecting teachers such as high staffing gaps, no clearly defined procedure for Teachers' Scheme of Service, limited training services, inadequate science and computer laboratories, limited internet services and general school infrastructure. This enables better working conditions for improved effectiveness of teachers.

Recommendations to the study

Though findings revealed that salary disparities do not seem to correspond with differences in teacher effectiveness, as both science and arts teachers are perceived as equally effective in their roles. The following recommendations could be put into considerations in relation to the study objectives.

The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

Develop specialized training programs for science teachers to enhance their effectiveness in various teaching aspects. These programs should focus on areas where science teachers exhibit lower effectiveness compared to arts teachers, such as designing instructional materials and participating in guidance and counseling of students.

Introduce performance-based incentives for science teachers. Establish clear criteria for evaluating their effectiveness, and reward those who consistently demonstrate high levels of performance in various aspects of teaching, contributing to students' achievements, and engagement in extracurricular activities.

Provide opportunities for professional development specifically tailored to science teachers. Invest in workshops, seminars, and training programs that enhance their skills in preparing schemes of work, designing instructional materials, and adopting innovative teaching methodologies, ultimately contributing to their effectiveness.

Implement a system of regular salary reviews to keep pace with inflation, changing economic conditions, and industry standards. This will ensure that science teachers' salaries remain competitive and reflect their dedication and contribution to the education system.

Address the challenges affecting science teachers such as heavy workloads, limited training on SESSEMAT and New lower secondary curriculum, inadequate science and computer laboratories, limited internet services and general school infrastructure so as to provide enabling working environment for science teacher effectiveness.

The effect of salary disparity on Arts teachers' effectiveness in government aided secondary schools

Implement a comprehensive review of the salary structure for arts teachers in government-aided secondary schools. Consideration should be given to equalizing salaries based on qualifications, experience, and performance to ensure a fair and competitive compensation system.

Establish a recognition program to acknowledge and reward arts teachers with high levels of effectiveness. This can include public acknowledgment, certificates of achievement, and additional perks to motivate and retain talented teachers.

Develop a career advancement framework for arts teachers, linking increased effectiveness to opportunities for career growth. Provide clear pathways for progression, such as mentorship programs, leadership roles, and additional responsibilities, which come with commensurate salary increases.

Ensure transparency in the evaluation criteria used to assess the effectiveness of arts teachers. Clearly communicate the expectations for performance in different aspects of teaching and provide constructive feedback to help them improve. This transparency will contribute to a fair assessment of their effectiveness and subsequent salary adjustments.

Fill staffing gaps in areas where secondary schools are understaffed. Deploy arts teachers to government schools based on vacant posts identified in specific schools to facilitate the successful implementation of the new competent based lower secondary curriculum.

The difference in the effectiveness of science teachers compared to arts teachers of government aided secondary schools.

Develop specialized training programs for science teachers to enhance their effectiveness in various teaching aspects. These programs should focus on areas where science teachers exhibit lower effectiveness compared to arts teachers, such as designing instructional materials and participating in co-curricular activities.

Explore opportunities for cross-training between science and arts teachers. Encourage knowledge-sharing and collaborative initiatives to foster a more balanced and integrated approach to teaching, benefitting both disciplines.

Implement targeted performance improvement plans for science teachers based on the identified areas of lower effectiveness. Provide resources, mentorship, and support to help them enhance their skills and bridge the gap in performance compared to arts teachers.

Conduct regular assessments comparing the effectiveness of science and arts teachers. Use the findings to tailor professional development programs, allocate resources, and implement strategies that address specific challenges faced by science teachers, ultimately working towards a more balanced educational environment.

Harmonise the salaries of both science and arts teachers through a comprehensive review of salary structure. Ensure that teachers with the same qualification doing the same work under similar working conditions and in the same scale be paid uniform compensation to promote teacher morale and avoid exacerbating shortages in critical subjects for a balanced and quality education in Uganda.

Areas for further study

Other areas for further study related to education, teacher effectiveness, and school dynamics would include;

1. Examine the difference in the effectiveness of male teachers and female teachers in schools.
2. Evaluate the effectiveness of different teacher training programs in preparing educators for diverse classroom environments.
3. Investigate the impact of ongoing professional development on teacher performance and student outcomes.
4. Explore various classroom management strategies and their influence on student behavior and academic achievement.

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Appendences

Appendix I: Informed Consent Form

Dear Respondent,

I am Baraire Benon a student at Bishop Stuart University (BSU) pursuing a Degree of Masters of Educational Administration and planning. I am currently conducting a Research study on the effect of salary disparity on the effectiveness of science teachers compared to arts teachers of government aided Secondary Schools in Bukanga County, Isingiro district.

I would appreciate your participation in this study. The information provided was used for education and research purposes only. Your participation is completely voluntary and anonymous. The information was kept strictly confidential.

Yours Faithfully,

.....

Appendix II: Questionnaire for Head teachers, Deputy Head teachers and Director of Studies

Dear Respondent,

I am Benon Baraire, a student of Bishop Stuart University, pursuing a Degree of Masters in Education Management, Planning and Administration. Conducting a study on the effect of salary disparity on Effectiveness of teachers in Government Aided Secondary Schools in Bukanga County, Isingiro district.

You have been identified as a respondent and you are kindly requested to complete the questionnaire as illustrated in each section. Kindly answer the questions as honestly as possible and the information you give was kept confidential and used for academic purposes only.

Section A- Bio data

1. Please indicate the correct option by ticking (✓)

What is your gender (a) Female ☐ (b) Male ☐

2. For how long have you been in this school?

- a) Less than a year
- b) 1-2years
- c) 2-3years
- d) 3 and above

3. What is position in school?

- (a) Head teacher
- (b) Deputy Head teacher
- (c) Director of Studies

4. What do you teach?

- (a) Sciences

(b) Arts

5. What is level of qualification?

(a) Masters' degree

(b) Bachelors' degree

Section 1: The effect of salary disparity on Science teachers' effectiveness in government aided secondary schools

Specify the Teacher: Subject

Sex

Age

Please indicate the extent to which you agree with the following statements by ticking (✓) appropriately

Key: 5= Very High, 4=High, 3= Moderate, 2= Low, and 1= Very Low.

Statement	5	4	3	2	1
The teacher effectively prepares schemes of work and lesson plans.					
The teacher regularly conducts lessons and remedial work.					
The teacher competently designs appropriate instructional materials.					
The teacher regularly participates in co-curricular activities.					
The teacher effectively carries out guidance and counseling of students.					
The teacher greatly contributes to students' achievement in exams.					

Section 2: The effect of salary disparity on Art teachers' effectiveness in government aided secondary schools

Specify the Teacher: Subject

Sex

Age

Key: 5= Very High, 4=High, 3= Moderate, 2= Low, and 1= Very Low.

Statement	5	4	3	2	1
The teacher effectively prepares schemes of work and lesson plans.					
The teacher regularly conducts lessons and remedial work.					
The teacher competently designs appropriate instructional materials.					
The teacher regularly participates in co-curricular activities.					
The teacher effectively carries out guidance and counseling of students.					
The teacher greatly contributes to students' achievement in exams.					

Appendix III: The Focused Group Discussion Guide for Teachers about work relations and job satisfaction.

1. How are you valued and appreciated by your school administration?
2. Do you feel your job is secure and stable? Give reasons for your answer,
3. Are you satisfied with the salary and benefits receive? Support your answer.
4. Do you feel that you have the resources you need to effectively do your job?
5. How can you be helped to effectively perform your duties?
6. (a) Are you satisfied with the opportunities for professional development at your school?
(b) If not so, what opportunities do need to enhance your professional development?
7. Do you have a good relationship with your colleagues and feel supported by them?
8. If yes, what are the indicators of this good relationship?
9. How does your school encourage innovative and creative teachers?
10. Overall, are satisfied with your job as a teacher? Give reasons for your answer.

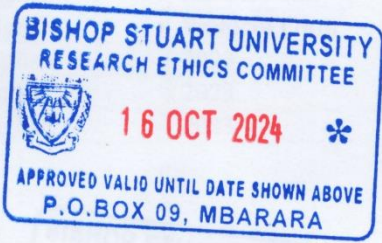
Appendix IV: Sample size determination table

<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 V: REC Approval letter

BISHOP STUART UNIVERSITY P.O.BOX 9, MBARARA	
Tel: 0772 512551	 Website: www.bsu.ac.ug E-mail: rec@bsu.ac.ug/info@bsu.ac.ug
RESEARCH ETHICS COMMITTEE	
To: BARAIRE BENON BISHOP STUART UNIVERSITY 0783644715 Type: Initial Review	16/10/2023 
Re: BSU-REC-2023-202: Salary Disparity and Professional Effectiveness of Teachers in Government Aided Secondary Schools of Bukanga County, Isingiro District	
I am pleased to inform you that at the 18 convened meeting on 12/10/2023, the Bishop Stuart University (BSU) REC meeting voiced to approve the above referenced application. Approval of the research is for the period of 16/10/2023 to 16/10/2024.	
As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:	
1. All co-investigators must be kept informed of the status of the research. 2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval prior to the activation of the changes. 3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC. 4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits. 5. Continuing review application must be submitted to the REC eight weeks prior to the expiration date of 16/10/2024 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. 6. The REC application number assigned to the research should be cited in any correspondence with the REC of record. 7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.	
The following is the list of all documents approved in this application by Bishop Stuart University (BSU) REC:	

Appedix VII: Introductory letter**BISHOP STUART UNIVERSITY****P.O BOX 09, MBARARA**Office Tel: 0772590865
Mob Tel: 0782873086**DIRECTORATE OF GRADUATE STUDIES,
RESEARCH AND INNOVATIONS**mail: pgd@bsu.ac.ug
dgsri@bsu.ac.ug
Website: www.bsu.ac.ug19th October, 2023

To Whom It May Concern

Dear Sir/Madam,

RE: INTRODUCTORY LETTER FOR MR. BARAIRE BENON

This is to introduce to you Mr. Baraire Benon, a student of Bishop Stuart University pursuing Master of Education Administration and Planning, Reg. No; 22/BSU/MEAP/0499 who is conducting his Masters' Research in Isingiro District.

His research topic is **"Salary Disparity and Professional Effectiveness of Teachers in Government Aided Secondary Schools of Bukanga County, Isingiro District"**

Any assistance rendered to him is highly appreciated

Yours faithfully



Dr. Johnson Atwiine (PhD)
Caretaker – Director, Directorate of Graduate Studies, Research and Innovations.
Bishop Stuart University

Appendix VII: Acceptance letter

Telephone
District Chairperson 0393216377
CAO: 0393216379
DCAO 0700525002
PAS: 0701845787
CFO: 0772556825
District Education Officer 0772564072
District Engineer
District Internal Auditor
District Health Officer



THE REPUBLIC OF UGANDA

Email Address: info@isingiro.go.ug

www.isingiro.go.ug

In any correspondence on

Isingiro District Local Government
Office of the District Education Officer
P. O. Box 1,
ISINGIRO, UGANDA
P.O. Box 1803,
MBARARA, UGANDA

Date: 23/10/2023

To All Government Aided Secondary School Headteachers
Bukanga County
Isingiro District

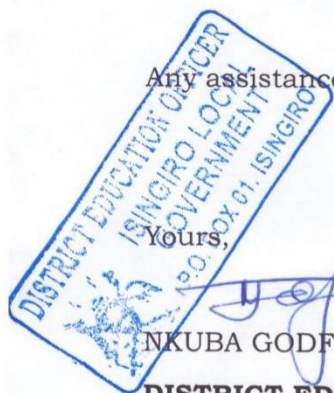
INTRODUCTORY LETTER FOR MR. BARAIRE BENON

This is to introduce to you Mr. Baraire Benon a student of Bishop Stuart University pursuing Masters of Education Administration and Planning who wants to carry out research in your schools.

His research topic is "**Salary Disparity and Professional Effectiveness of Teachers in Government Aided Secondary Schools of Bukanga County, Isingiro District**"

Any assistance rendered to him is highly appreciated.

Yours,



NKUBA GODFREY

DISTRICT EDUCATION OFFICER - ISINGIRO

24/10/2023

Appendix IX: Map of Isingiro District showing Bukanga Counties