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Research Article

Relationship Between High Levels of Teacher Preparation and Teacher Turnover and Its Impact on Sustainability of Education Systems in Public Secondary Schools in Bushenyi Ishaka Municipality, Uganda

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Abstract
This study examines the relationship between high levels of teacher preparation and teacher turnover in public secondary schools in Bushenyi–Ishaka Municipality, Uganda. Low levels of teacher turnover, which can be achieved through high levels of teacher preparation and support, lead to a more inclusive and equitable quality education and support teacher well-being. This ultimately contributes to a more sustainable and equitable educational environment through reduced disruptions. The study adopted a cross-sectional research design and employed a mixed-methods approach, integrating both quantitative and qualitative techniques within a single study. The target population consisted of 4,454 individuals, from which a sample of 367 respondents was selected using proportionate random sampling based on the number of teachers and students, calculated with Slovin's formula. Data were collected using questionnaires and interview schedules. Quantitative data were analyzed through Pearson correlation and multiple regression analysis using SPSS software version 27.0. Qualitative data were analyzed through thematic analysis. Reliability was established through Cronbach's alpha value of 0.872. Data was also analyzed through descriptive statistics like frequencies, means, and percentages. Results showed a strong negative correlation between high levels of preparation (HLP) and teacher turnover (r = -0.878, $p < 0.05$). This shows that teachers who have high levels of preparation tend to stay in their jobs. Multiple regression analysis was used to determine the influence of motivation on teacher turnover, which was significant at 64.5% (R^2 = 0.645). These results highlight the critical role of teacher preparation in reducing turnover, as well-prepared teachers tend to be more committed and satisfied with their work. Based on these findings, it is recommended that educational leaders implement comprehensive teacher training programs to enhance preparation and retention, thereby fostering a stable and effective learning environment for students.

Keywords: High Level of Preparation, Teacher Turnover, Public Secondary Schools, Uganda

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1. INTRODUCTION

In public secondary schools, teacher turnover is a critical problem that has an impact on student results and the quality of instruction (Ingersoll et al., 2014). Increased teacher turnover rates not only hinder the achievement of Education for Sustainable Development (ESD) goals but also pose a challenge to the attainment of Sustainable Development Goals (SDGs), especially SDG4, which deals with ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. In addition,

elevated employee attrition rates have the potential to disturb educational settings, impede the continuity of instruction, and diminish student progress (Towns, 2019). Teacher turnover has been shown to have a negative effect on students' academic performance in Bugangaizi West County, Kakumiro District, Uganda (Tumwesigye et al., 2022). The degree of preparation teachers receive before joining the field has been identified as one of the key variables that contribute to teacher turnover as well as a way to mitigate it (Carver-Thomas & Darling-Hammond, 2017). The purpose of this study is to investigate the connection between high preparation levels and teacher turnover in secondary public schools.

Teacher preparedness has been shown to have a positive impact on organizational commitment through teacher self-efficacy (Pan, 2023). In today's world, digital literacy is essential. Teachers need to be prepared to use technology effectively in their classrooms, both for teaching and for managing knowledge and resources (Cortelazzo, 2014). Recent research results indicate that the growth in both quantity and quality with poor learning outcomes has led to a focus on teacher selection, preparation, deployment, and management (Taylor, 2023). Therefore, Sustainable Development Goal 4 aims at a significant increase in the supply of qualified teachers in the world's schools by the year 2030. When measuring the situation with respect to this goal in 2018, UNESCO (SDG 4 data book: Global education indicators 2018) forecasted that by the year 2030, fewer than half of primary and lower secondary teachers in Africa would be adequately qualified. Moreover, a non-systematic review done by Schotgues (2022) indicates that there are serious challenges with teacher content knowledge, pre- and in-service training, quality and quantity of teaching and learning materials, and teacher attendance in Sub-Saharan Africa. Low levels of preparation can lead to turnover as insufficiently trained teachers can feel overwhelmed, underprepared, and lacking confidence in their abilities, which are key factors contributing to burnout. When teachers feel unprepared, they may experience a lack of fulfillment and satisfaction in their roles, potentially leading to a decrease in motivation and commitment (Oh, 2023).

Formal education, pedagogical training, material understanding, and classroom management abilities are all components of high levels of teacher preparation (Mayer, 2021). Comprehensive preparation programs give teachers the information, abilities, and self-assurance they need to successfully negotiate the demands of the profession. However, research indicates that significant teacher turnover rates continue to exist, especially in public secondary schools, notwithstanding the possible advantages of intensive preparation (Ingersoll et al., 2014). It is still unclear why there is still teacher turnover in spite of excellent training levels. Nonetheless, a number of variables have been proposed as contributing to teacher attrition. They consist of, among other things, w ork-life balance, opportunities for career advancement, and overall job satisfaction, support, and mentoring. High student-to-teacher ratios, scarce resources, and a lack of administrative support can all contribute to working conditions that make instructors unhappy, even those who get intensive training (Skaalvik & Skaalvik, 2017). The advantages of preparation may be outweighed by job discontent, which prompts teachers to look for work elsewhere.

Teachers may occasionally quit their jobs to pursue career advancement opportunities that aren't easily found in their current district or school (Beteille et al., 2012). Even with their preparedness, individuals can feel that their career advancement is limited and decide to look for chances elsewhere. In addition, teaching responsibilities might be excessive, especially in public secondary schools, which can result in attrition and burnout (Gray & Taie, 2015). Teachers may find it difficult to maintain a healthy work-life balance even with sufficient preparation, which may play a role in their decision to quit.

Although teacher preparation programs seek to offer prospective educators the guidance and assistance they need, the actual classroom setting may vary greatly from these expectations (Keller et al, 2018). In the end, turnover may result from teachers feeling alone and unprepared to face difficulties if they do not receive continuous support and mentoring. Nevertheless, there is evidence to show that extensive preparation programs can assist in reducing this issue, even in the face of the difficulties associated with teacher turnover (Ingersoll et al., 2014). Preparation programs can better prepare teachers to handle the intricacies of the profession and stay dedicated to their responsibilities in public secondary schools by adding components like mentorship, continual professional development, and field experiences (Carver-Thomas & Darling-Hammond, 2017). Thus, high preparation levels and teacher turnover in public secondary schools continue to be major issues in the United States. Numerous variables are contributing to this issue, according to research. Lack of resources and support, low pay, a heavy

workload, a lack of professional development opportunities, problems with student behavior and discipline, teacher evaluation systems, and personal reasons are a few of them. Due to a lack of resources and assistance, teachers frequently deal with extreme difficulties, such as antiquated facilities and insufficient money for classroom supplies (Ingersoll, 2012).

Attrition and demotivation have resulted from teachers' comparatively low pay when compared to other occupations requiring comparable degrees of education and experience (Sutcher et al., 2016). It worsens when excessive workloads, particularly for new and high-needs school teachers, contribute to teacher burnout, including class planning, grading, and extracurricular activities. Teacher discontent and stagnation are caused in part by a lack of significant professional growth and promotion possibilities (Sari, 2012). Nevertheless, after confronting pupils' behavior, professional development might not be enough. Significant difficulties arise in controlling student behavior and upholding discipline, which is frequently made worse by a lack of resources and insufficient administrative support (Billingsley & Bettini, 2019). In other cases, some systems for evaluating teachers create circumstances where there is continuous observation and pressure, which causes sentiments of undervaluation and increases turnover (Sutcher et al., 2017). In addition, individual considerations like migration, family responsibilities, or health problems also play a role in teacher turnover (Ingersoll, 2012).

Two other major issues facing public secondary schools in Europe are high preparation levels and teacher turnover. Numerous elements have a part in this problem: Due to administrative responsibilities, lesson planning, grading, and extracurricular activities, European teachers frequently experience high levels of stress and workloads (OECD, 2018); When compared to other occupations, teachers may earn very little money and little perks in several European nations, which can cause discontent and attrition; Lack of possibilities for genuine professional growth is a problem that many European teachers experience, which can lead to feelings of stagnation and a desire to look for work elsewhere (Eurydice, 2020); Teachers in Europe may find it difficult to control student behavior and uphold discipline in the classroom, especially at institutions with diverse student populations and few resources for assistance (European Commission, 2020); In European public secondary schools, individual factors including family responsibilities, health concerns, or the desire for career progression may also play a role in teacher turnover (OECD, 2019); Some European schools struggle with a lack of resources and assistance, such as antiquated buildings, restricted access to technology, and inadequate money for instructional supplies (Eurydice, 2020); Teachers may become frustrated and disillusioned with teacher evaluation systems in certain European nations if they believe them to be unjust or unduly bureaucratic (Symeonidis, 2018).

High levels of preparation and teacher turnover in South African public secondary schools are significant challenges that impact the quality of education. Many South African public schools lack sufficient support and resources, including funding for infrastructure, teaching materials, and technology. This can lead to frustration and burnout among teachers (van der Berg et al., 2016). Teachers in South Africa often receive relatively low salaries and limited benefits compared to the cost of living and the demands of the profession. Low compensation can demotivate educators and drive them to seek higher-paying opportunities elsewhere (Spaull, 2013). Besides, teachers face heavy workloads and high levels of stress due to large class sizes, administrative tasks, and socio-economic challenges in their communities. This can lead to exhaustion and a high turnover rate (van der Berg et al., 2016).

Many teachers in South Africa report a lack of access to meaningful professional development opportunities. Without ongoing, the educator may feel unprepared to meet the needs of their students (van der Berg et al., 2016). Also, in some cases, teacher evaluation systems in South Africa may be perceived as unfair or inconsistent, leading to dissatisfaction among educators. A lack of transparency and accountability can add feelings of frustration and disengagement (van der Berg et al., 2016). Other challenges include: Political instability, socio-economic inequality, and historical disparities in education continue to impact South African public schools. These broader societal issues can exacerbate challenges related to teacher preparation and retention (Spaull, 2013). In addition, managing student behavior and maintaining discipline can be particularly challenging in South African public schools, where socio-economic factors may contribute to disruptive classroom environments. Teachers may feel unsupported in addressing these issues effectively (Spaull, 2013).

Like in many other nations, high preparation levels and teacher turnover in Kenya's public

secondary schools present serious problems for the educational system. There is insufficient financing for infrastructure, instructional materials, and technology in many Kenyan public schools. Teachers may become frustrated and burn out as a result of this insufficiency (Benjamin et al., 2017). When considering the demands of the profession and the expense of living, teachers' salaries and perks are comparatively low. Teachers who receive low salaries may become demotivated and look for higher-paid jobs elsewhere (Ochieng, 2020).

Mukaria et al. (2015) claim that because of their communities' socioeconomic difficulties, big class sizes, and administrative duties, Kenyan teachers work long hours and experience significant levels of stress. Exhaustion and a high turnover rate may result from this (Mukaria et al., 2015). According to Benjamin et al. (2017), there is a dearth of possibilities for significant professional development. Teachers may feel unprepared to handle the various requirements of their pupils, such as managing behavior and upholding discipline, without continual training and assistance (Benjamin et al., 2017; Ochieng, 2020). Teachers in Kenya may become dissatisfied with their teacher evaluation systems if they believe they are unfair or inconsistent, as reported by Benjamin et al. (2017). Frustration and disengagement can be exacerbated by a lack of accountability and openness (Benjamin et al., 2017). The difficulty increases when socioeconomic and political variables, such as Kenyan public schools, are impacted by issues with infrastructure, access to educational resources, socioeconomic disparity, and political instability. These more general social problems may make difficulties with teacher retention and preparation worse (Mukaria et al., 2015).

In Uganda, several factors lead to high preparation levels and significant teacher turnover. These elements affect many nations worldwide and are not specific to Uganda. These comprise, among other things, low pay and benefits, stress and workload, few opportunities for professional growth, inadequate resources and support, problems with discipline and behavior in students, teacher evaluation systems, and socioeconomic and political factors (Issa & Bisaso, 2020). In comparison to the cost of living and the responsibilities of the job, teachers in Uganda sometimes receive relatively modest wages and few benefits, according to Issa and Bisaso (2020). Teachers may get demotivated by this low salary and be encouraged to look for higher-paying jobs elsewhere (Issa & Bisaso, 2020).

According to Turyatunga et al. (2023), the socio-economic difficulties in their communities, the size of their classes, and administrative duties cause teachers in Uganda to have a lot of work and stress. Exhaustion and a high turnover rate may result from this (Turyatunga et al., 2023). According to Muhammad (2023), these factors, combined with a dearth of opportunities for genuine professional development, leave educators feeling unprepared to meet the varied needs of their pupils. According to Issa and Bisaso (2020), a large number of public schools in Uganda do not have enough funds for technology, instructional materials, or infrastructure. Teachers may become frustrated and burn out as a result of this insufficiency (Issa & Bisaso, 2020). When it comes to disciplining students and controlling conduct, these teachers will be overburdened, especially in cases where socioeconomic issues exacerbate disruptive classroom situations. This is particularly true when educators perceive a lack of assistance in effectively tackling these problems (Turyatunga et al., 2023).

Occasionally, teachers in Uganda become dissatisfied with the teacher evaluation systems because they believe they are unfair or inconsistent. Frustration and disengagement can be exacerbated by a lack of accountability and transparency (Muhammad, 2023). Furthermore, political unrest, socioeconomic disparities, and obstacles to infrastructure and educational resources accessibility have an impact on Ugandan public schools, according to Issa and Bisaso (2020). These more general social problems may make difficulties with teacher retention and preparation worse (Issa & Bisaso, 2020).

1.1. Literature Review

Ayall et al. (2021) in their study "Influence of school-based factors on teacher turnover intentions: A case of public secondary schools in Rachuonyo North Sub- County, Kenya," examined how school-based factors shape teachers' intentions to leave their jobs in public secondary schools. Out of a population of 390 teachers, 132 were selected using Fisher's sampling model. The questionnaire was reviewed by two experts to improve its quality and then piloted with non-participants, producing a Cronbach's Alpha of 0.7 or above, which confirmed reliability. Approval to conduct the study was obtained from NACOSTI and

the Homabay County Director of Education before data collection began. Findings showed that most questionnaire items had a low or very low impact on turnover intentions. However, poor communication and frustration were key drivers. The study recommends that school leaders, especially principals and deputies, foster supportive environments through professional conduct, clear communication, and small incentives like meals to reduce teachers' intentions to leave.

A study conducted by Mugo and Guyo (2018), "Factors contributing to labour turnover among public secondary school teachers in Kenya: A case of Embu County," explored the factors that result in labour turnover among secondary school teachers in Embu County. To accomplish this, the researcher adopted the descriptive survey research method, and the research was conducted in public secondary schools in Embu County. The researcher sampled the data using cluster sampling, where the Kieni education zone was randomly selected, resulting in the sampling of 120 teachers. The researcher used both primary and secondary data in the research study. For the primary data, the researcher used the questionnaire method, while for the secondary data, the researcher carried out a literature review on the factors that cause teachers' turnover. For the analysis of the collected data, the researcher used both qualitative and quantitative approaches, whereby the data were presented in the form of frequency tables, pie charts, and bar graphs. From the research study, it was found that the rate of turnover among teachers in public secondary schools in Embu County was high. Major contributing factors included limited recognition and involvement in decision-making, low salaries, heavy workloads, insufficient time for personal growth, weak reward systems, limited opportunities for professional development, and, to some extent, poor working conditions. The study concludes that without deliberate interventions, teacher turnover in Embu County is likely to keep increasing.

1.2. Statement of the Problem

Teacher turnover in Uganda's secondary schools rose from 4% in 2011 to 8% in 2016, before slightly dropping to 6% in 2017 (Arinaitwe, 2021). While this aligns with the estimated 5% African average, aggregated national statistics may mask higher turnover in rural areas and specialised subjects (Bennel, 2025). In Bushenyi–Ishaka Municipality, reports indicate that many teachers leave their schools for better opportunities or alternative careers, resulting in an annual turnover of about 4.7%, equivalent to roughly 11 teachers per year (Bushenyi–Ishaka Municipal Report, 2023). Despite this, teacher welfare and professional growth remain inadequate. Limited promotion opportunities, rigid staffing structures, and restricted access to further training discourage retention. Study leave is rarely granted, and schools often lack resources to support professional development (Mulkeen & Crowe-Taft, 2010). Although teacher turnover persists in Uganda's secondary schools (Guajardo, 2011), there is limited empirical evidence examining how advanced teacher preparation relates to turnover in public secondary schools. This gap forms the foundation of the present study.

1.3. Objective of the Study

The study achieved the following objectives:

1. To find out the demographic profile of teachers in Public Secondary Schools in Bushenyi–Ishaka Municipality, Uganda
2. To find out the relationship between high levels of teacher preparation and teacher turnover in public secondary schools in Bushenyi–Ishaka Municipality, Uganda.

2. METHODOLOGY

This section presents the approach used to carry out the study. It explains the research design, outlines the study area, describes the target population, and clarifies how the sample size was calculated and chosen. It further explains the sampling procedures, data collection instruments, and the steps followed during data collection. The section also highlights strategies used to ensure data reliability and validity, methods of data handling and analysis, how the study variables were measured, and the ethical principles observed throughout the research.

2.1. Research Design

In this study, a cross-sectional research design was employed. This type of observational research involves the collection of data from a population or a representative sample of the population at a given time. This research design was appropriate for this study since it gives an overview of a population (Thomas, 2020).

2.2. Research Approach

The researcher used the mixed approaches design, which is an integration of both quantitative and qualitative approaches in one single research study. The design was used to attain an all-rounded comprehension of the research subject (Creswell, 2014).

2.3. Target Population

The study focused on a target population of 4,454 participants comprising 4 headteachers, 232 teachers, 4218 learners from four (4) public secondary schools in Bushenyi- Ishaka Municipality (Bushenyi–Ishaka Municipality Report, 2023). Table 1 shows the distribution of the study population by school.

Table1. Target Population

S/No	School	Head Teachers	Teachers	Students	Total
1	A	1	50	780	831
2	B	1	50	720	771
3	C	1	91	2068	2160
4	D	1	41	650	692
Total		4	232	4218	4454

Source: Researcher, 2024

2.4. Sample Size

The sample size of the study was attained from the four schools in Bushenyi–Ishaka Municipality, using Sloven's formula, $n = N/1+N(e^2)$, where N = target population, n = sample size, and e = margin of error (0.05).

From this formula, the sample size was as follows: $n = 4454/1+4454(0.0052) = 367$. This sample included 4 head teachers, 19 teachers, and 344 students. The sample of teachers and learners was selected using proportional random sampling to ensure their representation matched their actual numbers in society. The actual number of teachers and students from each school was computed. Table 2 presents the breakdown of the sample size by school.

Table 2. Sample Size

School	Head Teachers	Teachers	Students	Total
A	1	4	64	69
B	1	4	59	64
C	1	8	168	177
D	1	3	53	57
Total	04	19	344	367

Source: Researcher, 2024

2.5. Sampling Techniques

The schools were identified by the letters of the alphabet A, B, C, and D for confidentiality purposes. The teachers and students from each school were picked casually, with proportional representation based on the number of teachers and students in relation to the overall totals across all schools. Headteachers were selected purposively since there were only four (4) headteachers in four (4) public secondary schools in Bushenyi–Ishaka municipality.

2.6. Data Collection Sources

For this study, only primary data was used because it has a high level of accuracy, relevance, and originality, and is up-to-date (Kabir, 2016). Primary data was collected by use of questionnaires. The information was collected and recorded by the researcher based on the views and opinions of the respondents about the study variables.

2.7. Data Collection Instruments

The data was gathered from primary sources (Amin, 2005) using both quantitative and qualitative approaches. Questionnaires and interview guides were used to collect primary data as explained below.

2.7.1. Questionnaire

A questionnaire is a tool consisting of structured questions aimed at gathering information from teachers and students (Amin, 2005). In this study, both interview guides and self-administered questionnaires were used to collect primary data, which is information obtained directly from the source, typically through surveys or fieldwork. Secondary data, on the other hand, was sourced from journals and other publicly available databases. The instruments included both open-ended and closed-ended questions, as they are easy to answer, save time, keep respondents focused, and effectively capture both quantitative and qualitative information.

Self-administered questionnaires were easy to administer to respondents in a very short time, even when the researcher was not present. They were appropriate for the large number of respondents as they required a small amount of the respondents' and the researcher's time (Amin, 2005). The questionnaires were used because the study was interested in variables that could not be observed directly, such as past experiences, feelings, attitudes, and opinions. The questionnaires were the most appropriate method for obtaining data because of the sample size and the amount of time available, and the literacy of most participants, which made it easy for them to respond to the questionnaire (Amin, 2005).

For this research, the questionnaire consisted of six major parts, namely: (i) the introduction, (ii) demographic information, that is, age, gender, and teaching experience, (iii) motivation, (iv) teacher turnover, (v) open-ended questions, and (vi) conclusion.

2.7.2. Interview Guide

This is a collection of questions presented to respondents during face-to-face interactions. Thus, a semi-structured interview guide was used to gather qualitative data. This guide facilitated the gathering of exploratory data by eliciting detailed and specific information from respondents. Comprising open-ended questions, the interview guide encouraged in-depth responses, providing rich and nuanced insights into the research topic. The researcher relied on full cooperation from participants to ensure that the information collected was accurate and reliable. Thus, interview guides were used for collecting qualitative data and to obtain more specific information. The interview guide consisted of open-ended questions that required respondents to come up with in-depth answers. The nature of the follow-up questions was such that it helped to ensure the participants responded comprehensively through the interview guide. Purposively, the Headteachers responded to the interview guide.

2.8. Piloting the Study

To ensure the research instruments were clear and easy for participants to understand, a pilot study was conducted at Plus Two High School in Bushenyi District. This school was chosen because it falls within the study area and shares similar characteristics with the selected schools. The piloting process allowed the researcher to identify unclear or confusing questions, make necessary revisions, and refine the instruments to improve their clarity, relevance, and overall effectiveness for the main study.

2.9. Validity of Instruments

Validity refers to the accuracy and trustworthiness of conclusions drawn from research findings (Sürücü & Maslakci, 2020). It represents the extent to which the data collected accurately reflects the phenomena under investigation. Content validity was strengthened through expert judgment, which reviewed the instruments to ensure their relevance and suitability for addressing the research objectives. The questionnaires and interview guides were pretested to confirm that their items effectively measured what they were designed to assess. Furthermore, the Content Validity Index (CVI) was computed to quantitatively verify the validity of the instruments using Amin's (2005) formula: CVI = R/N, where R is the number of items rated as valid, and N is the total number of items. This process ensured that the research tools were appropriate, precise, and capable of producing reliable and meaningful data for the study.

Table 3. Calculated Content Validity Index of the Questions

Questionnaire	Content Validity Index
Questionnaire for head teachers and teachers	CVI = $\frac{43}{50}$ = 0.86

Source: Primary Data, 2024

From Table 3 above, it can be seen that the computed CVI is 0.86, which is above the minimum 0.7 suggested by Amin. Therefore, the instrument was proven valid.

2.10. Reliability of Instruments

To ensure reliability, the instruments were pretested during the pilot study. The researcher also performed a pilot study to ascertain whether it was repeatedly measuring what it was expected to measure. Therefore, for purposes of illustrating reliability, it was decided to use the Cronbach's Alpha (α) coefficient, which is a measure of reliability since it calculates how closely an item on a test is related to a group of questions. The instruments are reliable if the value of Cronbach's Alpha (α) coefficient is greater than 0.7 (Amin, 2005).

Table 4. Computed Cronbach's Coefficient Alpha

Cronbach's Alpha	Number of Items
.872	43

Source: Primary data, 2024

Table 4 indicates that the computed Cronbach's alpha coefficient was 0.872, which is higher than 0.7. Hence, the questionnaire was reliable.

2.11. Data Analysis

This was comprised of quantitative and qualitative data analysis.

2.11.1. Quantitative Data Analysis

Before analysis, the data collected in the field were carefully checked for accuracy and completeness. The dataset was cleaned, organized, and prepared using Microsoft Excel before being imported into SPSS version 27.0 for detailed analysis. To assess the impact of motivation on teacher turnover in public secondary schools, descriptive and inferential statistics were used. Descriptive statistics, such as frequency, percentage, mean, and standard deviation, were used to describe the findings in a manner that was easily understandable by the reader. Frequencies provided a clear picture of the number of respondents in each category, while percentages allowed comparisons across groups of different sizes (Siedlecki, 2020). Inferential statistics, including Pearson's correlation and regression analysis, were employed to examine the strength, direction, and significance of relationships between motivation and teacher turnover, providing insight into the underlying patterns and predictive trends. Pearson's correlation coefficient (r) was calculated using the following formula:

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

Where;

- x_i are the values of the independent variable in the sample
- $\bar{x}$ is the mean of the independent variable
- y_i are the values of the dependent variable in the sample
- $\bar{y}$ is the mean of the dependent variable

2.11.2. Qualitative Data Analysis

Qualitative data were analyzed using thematic analysis. Recorded interviews were transcribed into text, then coded and organized into sub-themes and main themes based on the study objectives. This method allowed for efficient and cost-effective analysis. Recurring patterns and significant points were carefully identified, documented, and interpreted. The process involved systematically sorting, reflecting on, and examining the data to extract meaningful insights, ensuring that the analysis accurately represented participants' perspectives (Amin, 2005).

2.12. Ethical Considerations

The researcher observed ethical principles throughout the entire study to ensure that participants were treated fairly and respectfully. This included obtaining informed consent, maintaining confidentiality of all information provided, carefully considering potential risks and benefits, upholding honesty in the research process, and respecting the rights and dignity of all respondents.

Informed consent: Participation in the study was purely voluntary. All respondents were clearly informed about the purpose of the research, the procedures involved, and the expected duration of their participation. They were also made aware of the possible benefits of the study, enabling them to make informed decisions about whether to take part without any pressure. The researcher assured participants that their information would remain confidential and would not be shared with any third party without their permission.

Privacy and Confidentiality: All data collected in this study were strictly for academic purposes and treated with confidentiality. Participants were assured that personal information would remain private and that identifiers would not be linked to their responses. To reinforce this, respondents were instructed not to write their names on the questionnaires.

Integrity: The study upheld integrity by confirming that all respondents were handled respectfully and humanely. The researcher ensured honesty throughout the research process, confirming that data analysis, interpretation, and presentation were based solely on the information collected. Participants' rights were upheld, with interviews and questionnaire administration conducted at convenient times.

Anonymity: Participants' identities were kept confidential, and no personal identifiers appear in the study's text. Sensitive information was carefully handled and used only for academic purposes. A statement emphasizing anonymity and confidentiality was included on the questionnaires. The researcher also acknowledged all sources appropriately through citations and references, followed accepted research standards, and adhered to all steps necessary for scientific validity. Fairness in respondent selection was maintained through proper sampling methods, and study findings were reported in a generalized manner to protect participants.

3. RESULTS OF THE STUDY

This chapter presents the findings of the study, including the background characteristics of the students. Both quantitative and qualitative data were analyzed, with qualitative data complementing the

descriptive results to provide deeper explanations of the study constructs, as illustrated in the relevant sections.

3.1. Response Rate

The study initially targeted 367 respondents, comprising 344 students, 19 teachers, for the questionnaire survey, and 4 headteachers for interviews. Complete data were successfully collected from 320 students and 15 teachers, while all 4 headteachers participated in interviews, resulting in a total of 339 respondents. This represents a response rate of 92.38%, which is considered sufficient for social science research, as Mellahi and Harris (2016) note that a minimum response rate of 50% is generally adequate in humanities studies.

3.2. Background of Respondents

The bio-data of respondents includes the gender, age groups, number of years spent at school, marital status, and education levels of both teachers and students from public secondary schools.

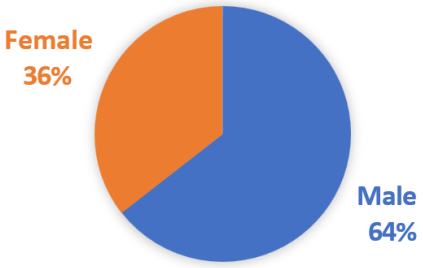

Figure 1. Gender Distribution of Respondents

From Figure 1 above, it can be observed that the sample is predominantly male, with 216 (64%) male respondents compared to 119 (36%) females, of the 335 respondents.

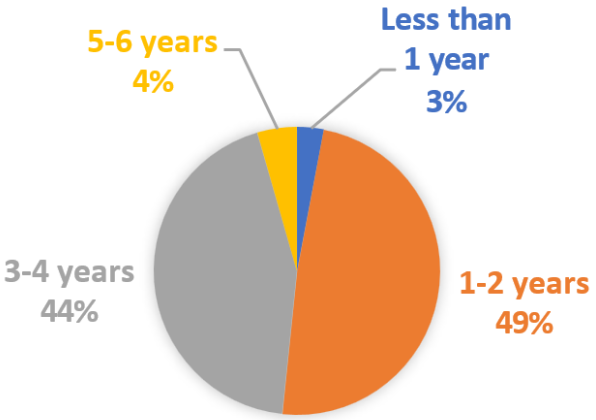

Figure 2. Period Spent at School by the Respondents

From Figure 2 above, it can be seen that nearly half of the respondents, 163 (49%), have been in their positions for 1-2 years, followed closely by those who have spent 3-4 years, 147 (44%). Only a small number (percentage) of respondents have been at their school for less than a year 10 (3%) or 5-6 years 15 (4%).

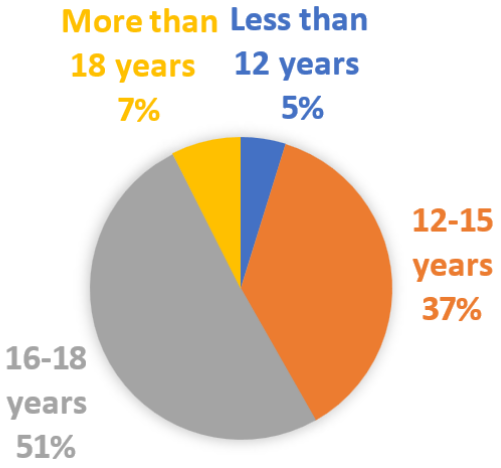

Figure 3. Age Distribution of Respondents

The age analysis reveals that over half of the respondents are within the 16-18 years age group, 170 (51%), followed by those aged 12-15 years, 124 (37%), with a smaller number of respondents aged less than 12 years, 16 (5%) or more than 18 years, 25 (7%).

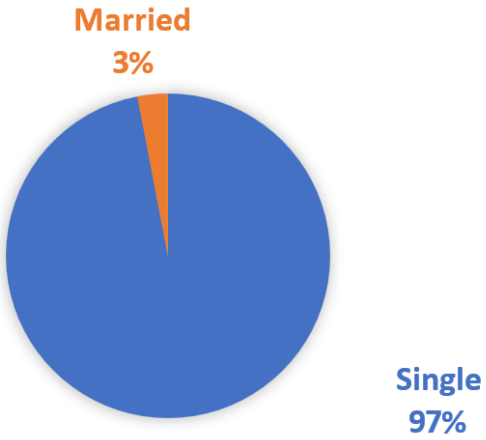

Figure 4. Marital Status of Respondents

Figure 4 above indicates that 325 (97%) respondents are single, with 10 (3%) being married and none is divorced.

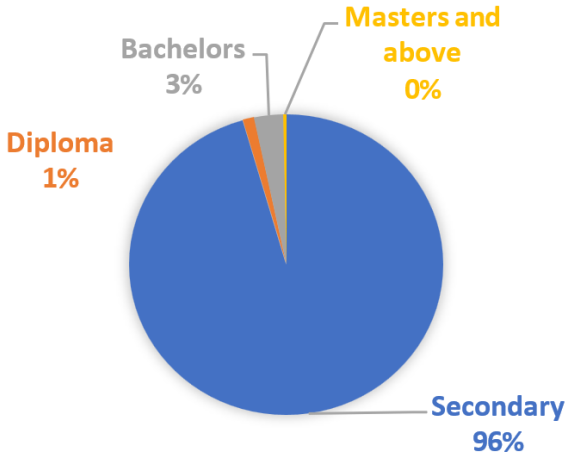

Figure 5. Education Level of Respondents

Education level reveals that the majority of respondents, 320 (95.52%), have a secondary education

level, with a smaller proportion of 4 (1.19%) holding a diploma, 10 (2.99%) a bachelor's degree, and only 1 (0.30%) holding a master's degree or above.

This demographic profile provides insight into the characteristics of the sample population, which can influence their perspectives on teaching enthusiasm, preparation, and student engagement.

3.3. Descriptive Statistics on Responses from Teachers

The questionnaire was distributed to teachers in public secondary schools, and out of the 19 teachers who received the questionnaire, only 15 teachers returned the filled questionnaires. Their responses were measured using frequencies, percentages, and means, and results were tabulated in the following table;

Table 5. Descriptive Statistics on High Levels of Teacher Preparation and Teacher Turnover in Public Secondary Schools

Item	F/%	SD	D	A	SA	Mean
1. Rate the effectiveness of your pre-service training in preparing you for the demands of classroom teaching.	F	-	1	11	3	3.13
	%	-	6.7	73.3	20	
2. Feel supported by colleagues when facing challenges in teaching practice	F	2	3	10	-	2.53
	%	13.3	20	66.7	-	
3. Administrative feedback helps improve instructional strategies.	F	1	3	10	1	2.73
	%	6.7	20	66.7	6.7	
4. I am satisfied with the ongoing professional development opportunities offered by your school	F	12	3	-	-	1.20
	%	80	20	-	-	
5. Professional Development activities have had a positive impact on career growth at school	F	-	2	10	3	3.07
	%	-	13.3	67.7	20	
Overall mean	F	15	12	41	7	2.53

Strongly disagree (SD) =1; Disagree (D)=2; Agree (A)=3; Strongly Agree (SA)=4; *Source:* Primary data 2024

The data reveal that teachers generally feel well-prepared by their pre-service training, with 73.3% agreeing and 20% strongly agreeing that it equipped them for the demands of classroom teaching, as indicated by a mean score of 3.13. This suggests that the foundational training is meeting teachers' needs, allowing them to handle classroom challenges effectively. Additionally, teachers feel a strong sense of support from colleagues, with 66.7% agreeing and a mean score of 2.53, indicating that collaborative relationships provide valuable resources and encouragement. Administrative feedback also appears to be beneficial, as 66.7% of teachers agree and 6.7% strongly agree that it positively impacts their instructional strategies, yielding a mean score of 2.73. This feedback is generally viewed as constructive, contributing to improved teaching practices.

On the other hand, dissatisfaction is evident in the area of ongoing professional development opportunities, where 80% of teachers strongly disagree, and 20% disagree with the statement regarding satisfaction, resulting in a low mean score of 1.20. This suggests that teachers feel their development needs are not being met, indicating a gap in the support provided by the school. However, despite this dissatisfaction, teachers see some value in the impact of professional development activities on career growth, with 67.7% agreeing and 20% strongly agreeing, giving a mean score of 3.07. This highlights a need for schools to enhance the quality and relevance of ongoing professional development, which could further support teachers' growth and meet their professional expectations.

3.4. Qualitative Results

In support of qualitative results, the qualitative results from headteachers' responses on the relationship between high levels of teacher preparation and teacher turnover in public secondary schools in Bushenyi–Ishaka Municipality, indicated the following;

Asked whether the staff is allowed to go for further studies, especially during holidays, the following was disclosed.

"… like in this school, teachers who teach during holidays have gone for training and further studies,

and are being aided by both the school and the parents of children studying during holidays. This has helped others to also engage in teaching during holidays due to the above motivation". One head teacher disclosed.

Asked what should be done to retain teachers in schools, another head teacher also disclosed that;

"*… teachers who are professionals are so important in school sustainability, and these teachers should be motivated by giving them extra allowances, and also raise their pay mainly to improve their living conditions both inside and outside schools.*"

On what influences teachers to make decisions, the following was disclosed;

"*…mainly head teachers have a role in deciding teacher decisions, creating attractive, good financial and incentive environments by treating teachers professionally and ethically, maintaining effective communication to maintain them and performance*".

Another head teacher also disclosed that;

"*… but at last, decision making for teachers in whether government- aided or private school depends on low payments, high workload, lack of time for self- development, lack of an effective reward system, lack of further professional development for teachers.*"

Another deputy head teacher also disclosed that;

"*… when schools are offering such incentives as meals and snacks to prevent potential turnover intentions, it is likely to work due to the current situation in Uganda. It is really imperative to do such*".

3.5. Descriptive Statistics on Responses from Students

The questionnaire was administered to students in public secondary schools in Bushenyi- Ishaka Municipality. 344 questionnaires were given out, and only 320 managed to return. The responses were measured using frequencies, percentages, and means to determine how the students responded to several issues put to them (see Table 6).

The data sheds light on students' perceptions of their teachers' effectiveness across various dimensions, such as subject knowledge, lesson organization, engagement strategies, and overall support. Overall, the findings suggest that while students recognize several strengths in their teachers, there are also notable areas where improvement is needed. In terms of subject knowledge, 61.56% of students believe their teachers possess a solid understanding of the content they teach, resulting in a mean score of 4.19. This indicates a generally favorable perception but also suggests that there is potential for enhancement in teachers' expertise. On the other hand, students have a more positive view of lesson organization, with 60.94% appreciating the clarity and structure provided in lessons, reflected in a mean score of 4.22. This high score indicates that well-organized lessons are valued by students and likely contribute to better comprehension and retention of the material presented.

Regarding engagement and resource utilization, the data reveals that 78.13% of students feel their teachers employ engaging methods to make lessons interesting, achieving a remarkable mean score of 4.70. This underscores the critical role of innovative teaching practices in capturing student interest. However, perceptions regarding resource availability are less optimistic. While 61.56% of students believe teachers have adequate resources for lesson preparation (mean score of 4.19), only 16.56% feel that teachers effectively utilize a variety of resources, such as technology and books, to enhance learning, resulting in a low mean score of 2.51. This gap highlights the need for better access to diverse teaching resources, which can facilitate a more dynamic learning environment.

Table 6. Descriptive Statistics on Examining High Levels of Preparation and Its Impact on Teacher Turnover in Public Secondary Schools

	F/%	SA	A	NS	D	SD	Mean
1. My teachers are knowledgeable about the subjects they teach.	F	197	63	10	25	25	4.19
	%	61.56	19.69	3.13	7.81	7.81	
2. My teachers organize their lessons well and follow a clear structure	F	195	65	15	25	20	4.22
	%	60.94	20.31	4.69	7.81	6.25	
3. My teachers use engaging methods to make lessons interesting	F	250	60	-	3	7	4.70
	%	78.13	18.75	-	0.94	2.19	
4. Teachers have access to sufficient resources and support to effectively prepare for classes.	F	197	63	10	25	25	4.19
	%	61.56	19.69	3.13	7.81	7.81	
5. My teachers use a variety of resources (e.g., technology, books) to enhance learning	F	53	17	15	189	46	2.51
	%	16.56	5.31	4.69	59.06	14.38	
6. High levels of preparation contribute to better teacher morale	F	180	80	10	30	20	4.16
	%	56.25	25	3.13	9.38	6.25	
7. Feels confident in his/her classroom management skills as a result of training	F	195	65	15	25	20	4.22
	%	60.94	20.31	4.69	7.81	6.25	
8. My teachers maintain a high level of professionalism	F	230	50	10	20	10	4.47
	%	71.88	15.63	3.13	6.25	3.13	
9. I believe that well-prepared teachers are more satisfied with their jobs	F	180	80	10	30	20	4.16
	%	56.25	25	3.13	9.38	6.25	
10. I think that teachers who are well-prepared experience less stress	F	195	65	15	25	20	4.22
	%	60.94	20.31	4.69	7.81	6.25	
11. Well-prepared teachers are more likely to stay at our school for a longer period.	F	250	60	-	3	7	4.70
	%	78.13	18.75	-	0.94	2.19	
12. Teachers who are well-prepared show greater commitment to their students.	F	170	85	20	20	25	4.11
	%	53.13	26.56	6.25	6.25	7.81	
13. I feel that my learning experience is better when teachers are well-prepared	F	197	63	10	25	25	4.19
	%	61.56	19.69	3.13	7.81	7.81	
14. Well-prepared teachers seem more motivated and enthusiastic about teaching	F	195	65	15	25	20	4.22
	%	60.94	20.31	4.69	7.81	6.25	
15. I notice that teachers who are less prepared tend to leave the school more frequently	F	250	60	-	3	7	4.70
	%	78.13	18.75	-	0.94	2.19	
16. The overall school environment improves when teachers are well-prepared	F	170	85	20	20	25	4.11
	%	53.13	26.56	6.25	6.25	7.81	
Overall mean	F	4283	1447	230	508	424	4.31

Key: 5-Strongly Agree (SA) 4-Agree (A) 3-Neutral (NS) 2-Disagree (D) 1-Strongly Disagree (SD). Primary data 2024

Moreover, students acknowledge the significance of teacher preparation and professionalism in creating a positive educational atmosphere. A noteworthy 56.25% of students think that thorough preparation leads to higher teacher morale, reflected in a mean score of 4.16. Additionally, with a mean score of 4.22, 60.94% of the students express confidence in their teachers' classroom management abilities, suggesting that they believe teachers can foster a productive learning environment. Furthermore, a high mean score of 4.47 indicates that students respect the professionalism exhibited by their teachers. In summary, while the data highlights several positive aspects of teaching practices, it also points to essential areas for growth, particularly regarding resource availability and the diversification of instructional methods.

The data illustrate students' perceptions regarding the relationship between teacher preparedness and various outcomes, such as job satisfaction, stress levels, and overall learning experiences. The responses reveal a clear consensus among students that well- prepared teachers positively influence the educational environment and contribute to their own learning.

Students overwhelmingly believe that well-prepared teachers are more satisfied in their roles, as indicated by 56.25% agreeing with this statement and a mean score of 4.16. Additionally, 60.94% of students feel that teachers who are well-prepared experience less stress, with a mean score of 4.22. This

suggests that adequate preparation not only boosts teachers' job satisfaction but also helps mitigate stress, creating a more conducive learning atmosphere. Furthermore, 78.13% of students believe that well-prepared teachers are more likely to remain at the school for extended periods, with a mean score of 4.70. This highlights the potential for improved teacher retention when staff are adequately equipped for their roles.

Moreover, students also recognize that prepared teachers demonstrate greater commitment to their students, although this statement garnered a lower agreement, with 53.13% expressing this view and a mean score of 4.11. This perception indicates that while commitment is acknowledged, there may be varying degrees of realization regarding its link to teacher preparedness. In terms of student learning experiences, 61.56% feel that their education is enhanced when teachers are well-prepared, as reflected in a mean score of 4.19. This emphasizes the direct impact of teacher readiness on students' educational outcomes. Lastly, 60.94% of students note that well-prepared teachers appear more motivated and enthusiastic about teaching, reinforcing the idea that preparation fosters a positive teaching attitude. Additionally, students perceive a connection between teacher preparedness and school stability, observing that less prepared teachers tend to leave the school more frequently, as supported by a mean score of 4.70. Overall, these insights underscore the importance of teacher preparation in enhancing both the educational environment and student learning experiences.

3.6. Correlation Analysis

Understanding the relationships between the research variables was aided by Pearson (r) correlations. The outcomes were derived from data that were gathered and examined using the SPSS program.

Table 7. Correlation Results on High Levels of Preparation (HLP) and its Impact on Teacher Turnover in Public Secondary Schools (TT)

		TT	**HLP**
TT	Pearson Correlation	1	-0.878**
	Sig. (2-tailed)		.000
	N	335	335
HLP	Pearson Correlation	-0.878**	1
	Sig. (2-tailed)	.000	
	N	335	335

**. Correlation is significant at the 0.05 level (2-tailed).

Table 7 shows a strong negative correlation between high levels of teacher preparation and turnover in public secondary schools (r = -0.878, p = 0.00 < 0.05). This relationship is statistically significant at the 0.05 level, meaning that when teachers highly prepare themselves for the work, by having clear schemes of work, teaching aids, and teaching materials, it leads them to find their teaching job easily, and they are likely to stay longer in teaching, hence reducing their turnover. This was supported by one of the head teachers who said that "*most teachers who normally prepare themselves for the lessons, find teaching interesting and they normally stay longer in teaching compared to their colleagues who do not prepare enough.*"

4. DISCUSSIONS

Correlation analysis reveals a strong negative relationship between high levels of preparation and teacher turnover, with a correlation coefficient of -0.878 (p = 0.000). This means that when the level of teacher preparation is high, teacher turnover is low; that is, high levels of teacher preparation lead to lower turnover rates. These findings are in line with the goals for education for sustainable development, as teachers who are highly prepared have the requisite teacher quality to promote inclusive education, leading to greater job satisfaction and longer tenure, ensuring long-term educational sustainability. These results align with previous research examining the effect of teacher preparedness on teacher turnover. For example, they agree with the findings of Pan (2023), who established that teacher preparedness has a positive impact on organizational commitment through teacher self-efficacy. They also agree with Darling-Hammond (2017), who indicated that effective lesson preparation enhances teacher efficacy and

commitment. Therefore, investing in professional development opportunities that focus on lesson planning and resource utilization can be an effective strategy for reducing teacher turnover. The findings are also in line with Ayall et al. (2021), who, in their study "Influence of school-based factors on teacher turnover intentions: A case of public secondary schools in Rachuonyo North Sub-County, Kenya", identified the factors influencing teacher turnover intention in secondary schools. The study concluded that most of the items in the questionnaire had either low or very low influence on teachers' turnover intention. The factors with strong influence were poor communication strategies and frustration. The role of school management, such as the head teachers and deputy head teachers, is essential in creating a conducive work environment. By handling teachers with professionalism and integrity, fostering clear communication, and providing small incentives such as food or refreshments, they can help reduce teachers' intentions to leave.

The findings also align with those of Mugo and Guyo (2018), who explored factors influencing labour turnover among public secondary school teachers in Embu County, Kenya. Their study found a high rate of teacher turnover in the region. Key contributors included limited recognition and involvement in decision-making, low pay, heavy workloads, inadequate time for personal development, weak reward systems, limited opportunities for further professional growth, and, to some extent, unfavourable working conditions.

Unlike recent findings by Mugizi et al. (2022), who in their study "Perceived support and teacher engagement in secondary schools in a rural district in South-Western Uganda", established that training has a significant impact on teacher engagement in hard-to-reach secondary schools in rural districts in western Uganda, our results focused on the factors that affect teacher preparation in public secondary schools in the Bushenyi–Ishaka Municipality. For example, our results indicate that teachers in Bushenyi–Ishaka Municipality rate the effectiveness of your pre-service training in preparing for the demands of classroom teaching, feel supported by colleagues when faced with challenges in teaching practice, feel that professional development activities have had a positive impact on their career growth at school, and agree that administrative feedback helps them improve instructional strategies. However, they are not satisfied with the ongoing professional development opportunities offered by your school.

5. LIMITATIONS OF THE STUDY

The fact that we limited our study to a specific geographical region in Bushenyi–Ishaka Municipality and specifically to public secondary schools enabled us to capture diverse perspectives, provide in-depth insights, and enable real-time interaction. The fact that we focused on public secondary schools that are government aid meant that we focused on schools in direct contact with educational stakeholders tasked with the fulfilment of Educational for Sustainable Development goals. Below, we state some of the limitations of the study.

1. Sample size: In the determination of the sample, we assumed a target population of 4454 consisting of students, teachers, and headteachers without segregating them. Sloven's formula yielded a sample size of 19 for teachers, which might not properly represent the population of teachers in Bushenyi–Ishaka municipality.
2. Data quality issues: We do not discount that there could be some errors during data collection and analysis.
3. We limited our study to public secondary schools in Bushenyi–Ishaka Municipality, which might not give a proper representation of all secondary schools in the study area.

6. CONCLUSIONS

High levels of preparation emerged as another significant factor affecting teacher turnover. The correlation analysis revealed a robust negative relationship between teachers' preparation efforts and teacher turnover. When teachers are well-prepared, they are better equipped to meet the challenges of their roles, resulting in increased efficacy and commitment. Educational leaders should invest in professional development programs that enhance teachers' skills in lesson planning and resource

utilization. By equipping teachers with the required tools to succeed, schools can create an environment that not only reduces turnover but also enhances the quality of education provided to students.

7. RECOMMENDATIONS

High levels of preparation are synonymous with improved quality of teachers and have been shown to be critical for promoting inclusive education and ensuring long-term educational sustainability through enhanced teacher job satisfaction and reduced teacher turnover. Schools should prioritize professional development initiatives that equip teachers with essential skills and resources for effective lesson planning and classroom management. This could include workshops on curriculum design, technology integration, and innovative teaching methodologies. Furthermore, mentorship programs can pair experienced educators with novice teachers, fostering a supportive environment where knowledge and best practices are shared. Such initiatives not only help teachers feel more prepared but also create a collaborative culture that values continuous improvement. For future studies, we recommend studies that examine how continuous professional development contributes to teacher retention in alignment with the Education for Sustainable Development Goals.

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