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STRATEGIC HUMAN CAPITAL MANAGEMENT PRACTICES ON TEACHER SHORTAGES IN PUBLIC SECONDARY SCHOOLS IN MBALE DISTRICT, UGANDA

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Abstract:
The study sought to investigate how strategic human capital management practices influence teacher shortages in public secondary schools in Mbale district, Uganda. The study was based on the resource-based view and stakeholder theory. The study used a correlational study design and followed a quantitative research approach. Descriptive analysis was employed to analysis was employed to analyze the data. Pearson's Product Moment Correlation Coefficient (R) was used to determine reliability, with Pearson correlation coefficients of 0.709 and 0.757 for the principal questionnaire, 0.803 for the BOG questionnaire, and 0.706 for the teacher questionnaire. Content validity was ensured through expert review by specialists from the Department of Educational Management and Foundations. Data from questionnaires were coded and analyzed using SPSS.

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Descriptive statistics were used to summarize findings, while inferential analysis through linear regression was used to test hypotheses. Findings revealed that revealed that Strategic human capital management practices had a significant positive influence on academic outcomes, indicating their role in addressing teacher shortages ($R = .621$, $R^2 = .386$, $p < .001$). The study findings provide empirical evidence on the participatory strategic planning on students' academic performance, guiding school administrators and education stakeholders in adopting inclusive planning practices that enhance ownership, accountability, and academic outcomes. It may also inform policymakers and education planners on the effectiveness of strategic resource allocation in reducing rural–urban performance disparities, thereby supporting equitable distribution of educational resources and improved UCE pass rates.

Keywords: human capital, management, teacher shortages, public secondary schools

1. Introduction

The Universal Secondary Education (USE) program, which aims to increase access for marginalized groups, is one of the policies that support Uganda's 7-4-2 educational system (seven years of primary, four years of lower secondary, and two years of advanced secondary education) (Ministry of Education and Sports [MoES], 2019). Despite these efforts, public secondary schools face persistent challenges, including high dropout rates (23% at the Senior 3 level) linked to poverty, early marriages, and inadequate infrastructure, such as overcrowded classrooms and insufficient science laboratories (Uganda National Examinations Board [UNEB], 2021; World Bank, 2022).

Teacher motivation remains low due to delayed salaries and heavy workloads, further undermining instructional quality (Ssentamu, 2020). To address these gaps, Uganda's National Development Plan III (NDP III) prioritizes education quality through ICT integration and teacher training, while the Education Sector Strategic Plan (ESSP 2019–2023) emphasizes equitable resource distribution (Government of Uganda, 2020; MoES, 2019). However, implementation lags persist, particularly in rural areas like Mbale, where NGO-led initiatives (e.g., Building Tomorrow's school partnerships) struggle to scale impact amid funding shortfalls (Muyingo, 2018; UNICEF, 2021).

Mbale District, located in Eastern Uganda, has a population of approximately 553,000 residents, with 78% engaged in subsistence agriculture and informal trade, contributing to high poverty rates (UBOS, 2020). The district's socio-economic landscape is marked by cultural diversity, with dominant ethnic groups such as the Bagisu and Iteso coexisting alongside minority communities, creating unique dynamics in educational access (Nabirye, 2020). Public secondary schools in Mbale grapple with stark rural-urban divides: urban schools like Mbale Secondary School benefit from better infrastructure, while rural institutions such as Bubulo Secondary School lack electricity, laboratories, and adequate sanitation (District Education Office, 2021). Enrollment trends reveal disparities, with girls constituting only 43% of Senior 4 students in rural areas due to

socio-cultural norms and early marriages (EMIS, 2022). Academic performance gaps persist, as evidenced by the 2021 Uganda Certificate of Education (UCE) results, where rural schools averaged a 48% pass rate compared to 72% in urban centers (UNEB, 2021). These challenges are compounded by teacher shortages, with a pupil-teacher ratio of 65:1 in rural Mbale, far exceeding the national target of 40:1 (MoES, 2020).

2. Purpose of the Study

The purpose of the study was to investigate the role of strategic human capital management practices on teacher shortages in public secondary schools in Mbale District, Uganda.

2.1 Hypothesis of the Study

The following hypothesis guided the study

Strategic human capital management practices have no significant effect on teacher shortages in public secondary schools in Mbale District, Uganda.

3. Conceptual Framework

Figure 1.1: Conceptual Framework

Source: Author.

The association between academic achievement in public secondary schools and strategic planning methods is depicted in Figure 1.1.

4. Theoretical Framework

The study was based on stakeholder theory. Stakeholder theory is mostly used as a management tool. An organization's stakeholders are characterized by their validity, urgency, and authority. Managers must consider urgency and power if they are to meet the moral and legal requirements of true stakeholders (Mitchell *et al.*, 1997). Therefore, strategies for identifying and managing stakeholders are included in stakeholder theory. Furthermore, a great deal of effort has been put into determining the relative effect of various stakeholders (Mitchell *et al.*, 1997). Having a clear understanding of what a

stakeholder is is essential to being able to identify them. A broad definition of stakeholders is given by Freeman's (1984) definition, which is later cited:

According to the theory put forth, secondary schools can be described as complex environments with numerous stakeholders who frequently have conflicting, ambiguous goals. The transfer of useful concepts, methods, and concepts from the private to the public sectors is not, however, categorically prohibited by any substantial evidence. However, the probability of positive results of such transfers is expected to be linked to the extent of adjustment to fit the features of the desired context. The identification of crucial components that affect an organization's capacity to accomplish its objectives is based on a strategic plan. Stakeholder theory encompasses a variety of management techniques and tools created especially to assist managers operating in complex contexts. The theory's fundamental principles include the recognition that a wide range of stakeholders surround every organization or project and that these stakeholders have the power to influence how the project is organized. To manage an organization or project with the least amount of friction, it is crucial to comprehend the interests of the major stakeholders. In strategic planning, schools can utilize stakeholder theory to manage human capital. Stakeholder analysis is especially helpful in mapping important stakeholders of a project and determining their distinct interests in the project.

5. Literature Review

5.1 Strategic Human Capital Management Practices on Teacher Shortages in Public Secondary Schools in Mbale District, Uganda

Human capital management (HCM) in education encompasses the strategic processes of recruiting, deploying, developing, motivating, and retaining teachers to enhance instructional quality and student achievement. This strategy is consistent with the Human Capital Theory, which holds that spending on education and training boosts economic growth by increasing individual productivity (Becker, 1994). Becker suggests that educational investments directly increase the productivity of individuals, which in turn benefits societal development. In educational strategic planning, this theory advocates for a focus on human capital by emphasizing the recruitment, retention, and professional development of educators as pivotal for enhancing student outcomes (Schultz, 2003). A study by Psacharopoulos and Patrinos (2018) supports this by showing a positive correlation between teacher quality, which is enhanced through strategic human capital management, and student achievement, particularly in developing countries where educational resources are scarce.

However, critics argue that an over-reliance on human capital theory in strategic planning might overlook broader systemic issues within education systems. For instance, Hanushek and Woessmann (2015) contend that while teacher quality is crucial, the theory sometimes fails to consider the influence of external factors like socioeconomic status or school environment, which can significantly affect educational outcomes. Furthermore, a study by Carnoy (2016) highlights that without addressing issues like teacher motivation,

equitable distribution of educators, and the cultural relevance of education, investments in human capital might not yield the expected results, suggesting that strategic planning must integrate a holistic approach beyond just human capital investment.

Proponents of effective teacher and staff management argue that it is fundamental to school performance, with research by Kyeyune *et al.* (2020) demonstrating that structured professional development, mentorship, and regular performance appraisals contribute significantly to improving teaching quality, which in turn positively affects student outcomes. Ingersoll and Strong (2011) demonstrated that thorough induction and mentorship programs for new teachers improve instructional effectiveness and lower early career turnover, which in turn improves student achievement, supporting this viewpoint. Opfer and Pedder (2011) also stress the value of ongoing professional development in modifying instructional strategies to satisfy changing student needs and educational requirements.

On the other hand, critics like Balinda and Tumuhairwe (2021) point out that the benefits of such management practices can be severely undermined by systemic issues such as low salaries and poor working conditions, which lead to high turnover rates among educators. This view is echoed by a study from Hanushek *et al.* (2016), which suggests that despite investments in professional development, the lack of competitive compensation and supportive work environments results in a loss of skilled teachers, negatively impacting school performance. The high turnover not only disrupts the continuity of educational programs but also diminishes the return on investment in teacher training and development, as noted by Guarino, Santibanez, and Daley (2006), who argue that without addressing these underlying issues, efforts to manage human capital effectively might fall short.

Effective teacher recruitment and deployment are foundational to HCM. Ensuring that qualified teachers are placed where they are most needed, particularly in underserved areas, addresses disparities in educational access and quality. Retention strategies, such as providing competitive compensation and opportunities for career advancement, are crucial in maintaining a stable and experienced teaching workforce (Odden, 2011). Continuous Professional Development (CPD) is integral to teacher development, equipping educators with up-to-date pedagogical skills and subject knowledge. Instructional leadership plays a pivotal role here; school leaders who prioritize instructional quality foster environments where teachers are supported and encouraged to engage in ongoing learning (Hallinger & Murphy, 1985). Such leadership has been linked to improved teaching practices and student outcomes (Leithwood *et al.*, 2004).

Maslow's Hierarchy of Needs may also be used to analyze teacher motivation and retention. Before they can reach greater levels of professional satisfaction and self-actualisation, teachers must have their basic needs met, such as job stability and a safe working environment. Meeting these demands lowers turnover and increases work satisfaction (Maslow, 1943). Empirical research emphasizes how teacher quality affects student achievement. For example, studies show that student success can improve by

0.10 to 0.25 standard deviations for every standard deviation increase in teacher effectiveness (Goldhaber *et al.*, 2014). Moreover, sustained exposure to high-quality teaching can mitigate achievement gaps associated with socioeconomic status (Hanushek & Rivkin, 2012)

Strategic human capital management (HCM) interventions have been instrumental in addressing teacher shortages globally, particularly in rural and underserved areas. Countries like India, South Korea, and Finland have implemented targeted strategies such as rural posting incentives, housing support, and e-learning initiatives to mitigate these shortages. In India, rural areas often face significant teacher shortages due to a preference among educators for urban postings. States like Himachal Pradesh have responded to this by offering cash incentives, housing assistance, and professional development opportunities to entice educators to teach in underprivileged areas. These measures have led to improved teacher retention rates in rural areas (Education for All in India, 2023). However, a study by Muralidharan and Sundararaman (2011) using a randomized evaluation found that performance-based pay for teachers in rural India led to a 0.27 standard deviation improvement in student test scores, indicating that financial incentives can positively impact both teacher attendance and student outcomes.

South Korea has faced challenges in attracting international teachers, particularly for English language instruction. The country has implemented recruitment strategies that include housing allowances, paid holidays, and professional development opportunities to attract and retain foreign educators. Despite these efforts, the demand for international teachers continues to outpace supply, suggesting that additional measures may be necessary to address the shortage effectively (IPGCE, 2023). Finland has experienced teacher shortages in early childhood education (ECE), especially in the Helsinki metropolitan area. The Finnish government intends to expand the number of study spots in ECE teacher preparation programs in 2024–2025 in order to address this. In order to recruit and retain talented educators, a national study also suggests that ECE staff members have better-defined professional profiles and get more support for their well-being (European Commission, 2024).

Teacher management reforms across Sub-Saharan Africa have been pivotal in addressing challenges related to pupil-teacher ratios (PTRs), in-service training, and learning outcomes. In Kenya, a randomized controlled trial by Duflo, Dupas, and Kremer (2015) examined the impact of hiring contract teachers through Parent-Teacher Associations (PTAs). The study involved 210 primary schools, where PTAs hired additional teachers at a quarter of the standard salary. Results indicated a significant reduction in PTRs from 82:1 to 44:1, leading to a 0.19 standard deviation improvement in student test scores. This suggests that community-based hiring can effectively enhance educational outcomes.

The Ghana Accountability for Learning Outcomes Project (GALOP) sought to enhance instruction in basic education institutions with poor performance. In addition to implementing in-service training for instructors on the new standards-based curriculum,

the initiative aimed to reduce PTRs to less than 50:1. Schools that took part in GALOP had a 12% improvement in reading and numeracy results when compared to non-participating schools, according to the Ministry of Education (2019), underscoring the efficacy of combined PTR reduction and teacher training programs. The UK Department for International Development provided funding for Nigeria's Teacher Development Programme (TDP), which concentrated on providing elementary teachers in northern states with in-service training. The program employed a quasi-experimental design involving over 1,000 schools. Findings revealed that students taught by TDP-trained teachers scored 10% higher in literacy and numeracy assessments than those taught by untrained teachers, emphasizing the positive impact of targeted professional development (World Bank, 2017).

In Malawi, the Education Sector Improvement Project (MESIP) addressed high PTRs by constructing additional classrooms and recruiting more teachers. A study by the World Bank (2021) reported that schools benefiting from MESIP interventions experienced a decrease in PTRs from 78:1 to 60:1, accompanied by a 15% increase in student retention rates. This underscores the importance of infrastructure and staffing improvements in enhancing educational outcomes (World Bank). Rwanda's Teacher Development and Management Policy emphasized continuous professional development (CPD) and set target PTRs of 48:1 for primary and 29:1 for secondary schools. Despite these targets, challenges persist due to infrastructure shortages and high repetition rates. The Ministry of Education (2024) reported that only 60% of schools met the PTR targets, indicating the need for sustained investment in teacher recruitment and training to achieve desired learning outcomes.

In Uganda, teacher shortages significantly impact academic outcomes, as evidenced by data from the Ministry of Education and Sports (MoES), Education Management Information System (EMIS), and Uganda National Examinations Board (UNEB). The national average pupil-teacher ratio (PTR) in primary education stood at approximately 42.66:1 in 2017, markedly higher than the global average of 21.75:1, indicating substantial disparities in teacher distribution. Such imbalances are more pronounced in rural districts, where PTRs can exceed 60:1, adversely affecting the quality of instruction and student performance (Education Policy Review Commission, 2023).

The Teacher Incentive Framework (TIF), launched by MoES, aims to address these challenges by enhancing teacher motivation through improved remuneration and working conditions. However, evaluations suggest that while TIF has contributed to increased teacher satisfaction, its implementation has been uneven, limiting its overall effectiveness. Moreover, the Uganda Teacher and School Effectiveness Project highlighted issues of teacher absenteeism, with studies indicating that teachers are present in classrooms for only about 57% of scheduled teaching time, further compromising student learning (World Bank, 2017).

UNEB data reflect these challenges in academic outcomes. In 2023, 17.9% of candidates passed the Uganda Certificate of Education (UCE) examinations in the first division, an improvement from 13.5% in 2022. Despite this progress, disparities persist,

particularly in rural areas where teacher shortages and high PTRs continue to hinder student achievement. For instance, in the West Nile region, PTRs average 1:119, significantly above the national standard of 1:53, indicating a severe shortage of teachers**.** In Mbale District, initiatives aimed at enhancing human capital through in-service training and community-based support have been recognized for their potential in elevating teaching quality. Nabunya (2022) reports that these programs foster a collaborative environment that not only improves pedagogical skills but also strengthens community ties, which can be crucial for teacher motivation and retention. This aligns with findings by Hardman *et al.* (2019), who noted that locally tailored professional development initiatives in Sub-Saharan Africa can lead to significant improvements in instructional practices, thereby positively impacting student learning outcomes.

However, despite these promising efforts, the literature also highlights significant challenges that impede the full realization of these benefits. Okoth *et al.* (2023) point out that inadequate funding and the scarcity of professional development opportunities continue to be major obstacles, suggesting that without sustained financial support, the impact of these initiatives might be short-lived. This perspective is supported by Akyeampong *et al.* (2018), who argue that in regions like Mbale District, the lack of continuous investment in teacher training often results in a regression to traditional teaching methods, as teachers are unable to keep up with modern educational demands due to resource constraints.

6. Methodology

The study used a correlational study design and followed a quantitative research approach. Descriptive analysis was employed to analyze the data. Creswell (2014) states that when a researcher wants to evaluate the statistical relationship between variables using data gathered from individuals in a natural context, they employ a correlational design. According to Best and Kahn (2006), descriptive research allows the researcher to explain what exists in relation to variables or circumstances in a scenario and to gather factual knowledge on the state of phenomena. The integration of correlational and descriptive designs was justified in this study due to the multifaceted nature of the research objectives. Descriptive facilitated the identification and documentation of the current state of strategic planning mechanisms across schools, while correlational design allowed for the statistical analysis of the relationships between these mechanisms and academic performance outcomes.

6.1 Study Population, Sample Size and Sampling Techniques

A population, according to Gall, Gall, and Borg (2007), is any group of people who share one or more traits that are pertinent to a study issue. The total target population for this study was 7,771, comprising the following key stakeholders in the secondary education sector in Mbale District: 210 headteachers, 7,350 teachers, 210 Board of Governors (BoG) chairpersons, and one District Education Officer (DEO).

The number of individuals or units chosen from a population to be examined in a research study is known as the sample size. A sample, according to Kothari (2004), is a subset of the population chosen in accordance with particular guidelines and protocols in order to reflect the full population. The approaches or methods used to choose units from the population to be included in the research are known as sampling procedures (Mugenda & Mugenda, 2003). Orodho (2005) asserts that appropriate sampling ensures accuracy, reduces bias, and enhances the findings' generalizability. The sample size in this study was determined using the Krejcie and Morgan (1970) sample size determination table, which provides the statistically valid number of respondents needed to represent a population. Headteachers: 132 out of 210, Teachers: 364 out of 7,350 and Board of Governors Chairpersons: 132 out of 210. District Education Officer (DEO): Since there is only one DEO in the district, a census approach will be used, where the entire population (in this case, one individual) is included. Census sampling is appropriate for small populations where all members can be studied (Kumar, 2011). The study employed simple random sampling to select headteachers, teachers, and BoG chairpersons. By giving each member of the target group an equal chance of being chosen, this method reduces selection bias and guarantees the sample's representativeness (Kombo & Tromp, 2006). Purposive sampling will be used for the DEO. According to Creswell and Creswell (2018), this non-probability sampling strategy is suitable for choosing people who have particular information that is pertinent to the study's goals. The DEO, as the key implementer of education policy at the district level, is purposefully selected due to their authoritative role in strategic planning and oversight.

Table 1.1: Sample Frame

Respondents	Population	Sample Size	%
Head Teachers	210	132	62.86%
Teachers	7,350	364	4.95%
Board of Governor Chairpersons	210	132	62.86%
District Education Officer	1	1	100%

Source: Wemesa, R. (2026). Adopted from European Journal of Education Studies, 13(4). https://doi.org/10.46827/ejes.v13i4.6623

6.2 Data Analysis Procedure

Descriptive and Thematic analysis was employed to analyze the data. For descriptive analysis, data from questionnaires were coded and analyzed using SPSS. Thematic analysis was employed to examine qualitative data, as suggested by Braun and Clarke (2006), Thematic data analysis is a process that involves reading through survey responses multiple times to identify recurring topics, ideas, opinions, or patterns (Wemesa, 2026).

7. Results and Discussion

7.1 Strategic Human Capital Management Practices Have No Significant Effect on Teacher Shortages in Public Secondary Schools in Mbale District, Uganda

The table below presents the strategic human capital management practices as presented by BOMs in Mbale District, Uganda.

Table 1.2: Strategic human capital management practices in Mbale District, Uganda

Statements	Strongly disagree	Disagree	Agree	Strongly agree	Mean	Std. Deviation
1. Teachers receive regular in-service training.	21 (15.9%)	43 (32.6%)	47 (35.6%)	21 (15.9%)	2.52	0.945
2. Teachers are fairly appraised for performance improvement.	23 (17.4%)	41 (31.1%)	41 (31.1%)	27 (20.5%)	2.55	1.007
3. Promotions are based on merit and qualifications.	26 (19.7%)	37 (28%)	49 (37.1%)	20 (15.2%)	2.48	0.977
4. Motivation mechanisms exist for academic and non-academic staff.	22 (16.7%)	41 (31.1%)	50 (37.9%)	19 (14.4%)	2.5	0.937
5. Teaching staff are well-qualified for their subjects.	24 (18.2%)	40 (30.3%)	45 (34.1%)	23 (17.4%)	2.51	0.985
6. Staff recruitment is guided by school needs and policy.	21 (15.9%)	39 (29.5%)	50 (37.9%)	22 (16.7%)	2.55	0.952
7. Human resource development is prioritized in the school budget.	27 (20.5%)	35 (26.5%)	53 (40.2%)	17 (12.9%)	2.45	0.96
8. Leadership supports teacher professional growth.	23 (17.4%)	46 (34.8%)	38 (28.8%)	25 (18.9%)	2.49	0.992
9. The school offers non-monetary incentives (e.g., flexible schedules, housing) to attract teachers to "hard-to-staff" areas	22 (16.7%)	47 (35.6%)	36 (27.3%)	27 (20.5%)	2.52	1
10. Staff turnover affects academic performance.	23 (17.4%)	35 (26.5%)	46 (34.8%)	28 (21.2%)	2.6	1.01
11. Human capital is well-managed to ensure effective instruction.	22 (16.7%)	48 (36.4%)	41 (31.1%)	21 (15.9%)	2.46	0.952
12. Academic results improve when teachers are empowered and supported.	25 (18.9%)	32 (24.2%)	53 (40.2%)	22 (16.7%)	2.55	0.984
Overall Mean					**2.5139**	

The results in Table 1.2 indicate moderate agreement on human resource management practices in schools, as reflected by the overall mean of 2.5139, which falls within the agree range of the Likert scale. This overall mean suggests that respondents generally agreed that human resource management practices are fairly implemented and contribute to school functioning and academic performance. With respect to regular in-service training for teachers, 15.9% of respondents strongly disagreed and 32.6%

disagreed, while 35.6% agreed and 15.9% strongly agreed, indicating that a slight majority perceived training to be provided. On whether teachers are fairly appraised for performance improvement, 17.4% strongly disagreed and 31.1% disagreed, compared to 31.1% who agreed and 20.5% who strongly agreed, showing balanced but slightly positive perceptions. Regarding promotions based on merit and qualifications, 19.7% strongly disagreed and 28% disagreed, while 37.1% agreed and 15.2% strongly agreed, indicating general agreement with the promotion criteria. Concerning the existence of motivation mechanisms for academic and non-academic staff, 16.7% strongly disagreed, and 31.1% disagreed, compared to 37.9% who agreed and 14.4% strongly agreed, suggesting moderate support mechanisms. On the qualification of teaching staff for their subjects, 18.2% strongly disagreed, and 30.3% disagreed, while 34.1% agreed and 17.4% strongly agreed, indicating that most respondents perceived teachers as adequately qualified. Regarding staff recruitment being guided by school needs and policy, 15.9% strongly disagreed, and 29.5% disagreed, compared to 37.9% who agreed and 16.7% strongly agreed, reflecting agreement on structured recruitment practices. With regard to prioritization of human resource development in the school budget, 20.5% strongly disagreed, and 26.5% disagreed, while 40.2% agreed and 12.9% strongly agreed, indicating that development is generally budgeted for. On leadership support for teacher professional growth, 17.4% strongly disagreed, and 34.8% disagreed, compared to 28.8% who agreed and 18.9% strongly agreed, showing moderate leadership support. Regarding the school offers non-monetary incentives (e.g., flexible schedules, housing) to attract teachers to "hard-to-staff" areas, 16.7% strongly disagreed and 35.6% disagreed, while 27.3% agreed and 20.5% strongly agreed, indicating mixed but slightly positive perceptions. Concerning the effect of staff turnover on academic performance, 17.4% strongly disagreed, and 26.5% disagreed, compared to 34.8% who agreed and 21.2% who strongly agreed, suggesting that a majority acknowledged its impact. On whether human capital is well-managed to ensure effective instruction, 16.7% strongly disagreed, and 36.4% disagreed, while 31.1% agreed and 15.9% strongly agreed, indicating moderate agreement. Finally, on whether academic results improve when teachers are empowered and supported, 18.9% strongly disagreed, and 24.2% disagreed, compared to 40.2% who agreed and 16.7% strongly agreed, showing strong support for teacher empowerment.

Table 1.3: Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.621[a]	.386	.381	.75817
a. Predictors: (Constant), BOG				

The model summary in Table 1.3 shows a moderately strong positive relationship between BOG and UCE, as indicated by the correlation coefficient (R = .621). The R Square value of .386 implies that 38.6% of the variation in UCE is explained by BOG. The Adjusted R Square of .381 suggests that the model remains stable after adjusting for the sample size. The standard error of the estimate (.75817) indicates that the model predicts UCE with a reasonable level of accuracy.

Table 1.4: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.972	1	46.972	81.717	.000[b]
	Residual	74.726	130	.575		
	Total	121.699	131			
a. Dependent Variable: UCE						
b. Predictors: (Constant), BOG						

The ANOVA results in Table 1.4 indicate that the regression model is statistically significant. The model produced an F value of 81.717 with a p-value less than .001, showing that BOG significantly predicts UCE. This confirms that the regression model fits the data well and that the relationship between BOG and UCE is not due to chance.

Table 1.5: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.553	.219		2.524	.013
	BOG	.751	.083	.621	9.040	.000
a. Dependent Variable: UCE						

The coefficients in Table 1.5 show that BOG is a statistically significant predictor of UCE. The unstandardized coefficient (B = .751) indicates that a one-unit increase in BOG leads to an increase of 0.751 units in UCE, holding other factors constant. The standardized beta coefficient ($\beta = .621$) demonstrates a strong positive effect of BOG on UCE. This effect is statistically significant ($t = 9.040$, $p < .001$). The constant term is also statistically significant (B = .553, p = .013), indicating the expected value of UCE when BOG is zero.

Based on the unstandardized coefficients, the regression equation is expressed as:

$$UCE = 0.553 + 0.751(BOG)$$

The respondent described a range of strategic human capital management practices aimed at the recruitment, development, and retention of teachers, though their effectiveness varies in rural contexts such as Mbale. Recruitment strategies included:

"External sourcing through online platforms and job boards."

"Partnering with teacher training colleges and universities."

"Head hunting to fill key positions."

Despite these efforts, teacher shortages persist, particularly in rural schools, due to weak retention mechanisms. The respondent emphasized the importance of professional development:

Continuous Professional Development (CPD), mentorship, and induction programs help improve teacher effectiveness and job satisfaction."

Retention challenges were linked to working conditions and incentives:

"Ensuring better infrastructure, adequate teaching materials, and accommodation (especially in rural areas) helps retain competent teachers."

"Inadequate and delayed remuneration contributes to teacher turnover."

The impact of effective human capital management on student outcomes was clearly articulated:

"Higher teacher qualifications and extensive experience significantly correlate with better student academic performance."

"Stable staffing reduces disruption and improves student attendance and retention."

Analysis of budget reports and financial statements indicated that strategic resource allocation mechanisms in the sampled schools are inadequate to support improved academic outcomes, particularly in bridging rural–urban performance gaps. Although funds are allocated to instructional materials, infrastructure, ICT, and extracurricular activities, these allocations are consistently insufficient to meet institutional needs. Increased enrolment has further strained existing resources, while government funding has not kept pace with this growth, resulting in recurrent budget deficits. Financial statements also reveal a disproportionate allocation of funds toward non-instructional expenditures such as administration, utilities, and support services, at the expense of direct instructional spending.

The findings of this study are similar to those of Sheikh (2025), whose study examined how HRM practices (training, appraisal, and motivation) influence the performance of public secondary schools in Mandera East, Kenya. Using structured questionnaires with N = 79 respondents, the study employed Pearson correlation, multiple regression, and ANOVA to assess relationships. Results showed a strong collective correlation between HRM practices and school performance ($R = .842$), with the regression model explaining 70.9% of the variance in performance ($F = 135.50$, $p < .001$). Among the HRM dimensions, employee motivation ($\beta = .421$), training ($\beta = .287$), and appraisal ($\beta = .245$) each had a significant positive influence on performance, indicating that better HR practices were associated with stronger institutional outcomes.

Khaemba, Maiyo, and Manini (2025) also conducted a study in Kenya which examined the effect of strategic HRM practices on teacher performance in public secondary schools. Using regression analysis, the research showed that in-service training predicted a 53.9% improvement in teacher performance (*b = 0.539, $t = 1.918$, $p <$

.05). Employee recognition predicted a 91.7% improvement in performance (*b = 0.917, *t* = 3.371, *p* < .05), while performance appraisal predicted a 44% improvement (*b = 0.440, *t* = 0.855, *p* < .05). Teacher competence was found to partially mediate the relationship between HRM practices and performance, which aligns with moderate positive perceptions of training and appraisal in your results.

Hoque & Atheef (2024) did a systematic review and synthesized 44 publications (2012–2022) on HRM practices and school performance internationally. It identified key HRM dimensions such as planning, recruitment and selection, training and development, performance management, compensation, and employee relations, that are positively correlated with school performance outcomes across contexts. The review highlighted that well-implemented HRM practices enhance teacher competency, motivation, and instructional delivery, which in turn improve organizational and student outcomes.

Based on the findings, the null hypothesis that strategic human capital management practices have no significant effect on teacher shortages in public secondary schools in Mbale District, Uganda, is rejected. Descriptive results indicated moderate agreement on human capital management practices. However, inferential analysis further demonstrated that governance and human resource–related practices (BOG) had a statistically significant positive influence on academic outcomes ($R = .621$, $R^2 = .386$, $F = 81.717$, $p < .001$), underscoring the importance of effective human capital management in stabilizing instructional delivery.

8. The Findings of the Study

8.1 Strategic Human Capital Management Practices Have No Significant Effect on Teacher Shortages in Public Secondary Schools in Mbale District, Uganda

The findings indicate that strategic human capital management practices in public secondary schools in Mbale District are moderately implemented and play a significant role in addressing teacher shortages and supporting academic performance. Analysis of questionnaire data revealed moderate agreement among respondents, as reflected by an overall mean score of 2.5139, which falls within the agree range of the Likert scale. This overall mean suggests that respondents generally perceived human resource management practices as fairly effective. Most respondents agreed that schools provide regular in-service training, conduct performance appraisals aimed at improvement, promote teachers based on merit and qualifications, and implement motivation mechanisms for both academic and non-academic staff. There was also general agreement that teachers are adequately qualified for the subjects they teach, recruitment is guided by school needs and policy frameworks, and human resource development is prioritized in school budgets. Although perceptions of leadership support for professional growth and the provision of non-monetary incentives in hard-to-staff areas were mixed, a majority of respondents acknowledged that staff turnover negatively affects academic performance and that empowering and supporting teachers leads to improved academic results. Regression analysis further demonstrated a moderately

strong and statistically significant relationship between strategic human capital management practices (BOG) and students' academic performance (UCE). The model summary showed a correlation coefficient of R = .621, indicating a strong positive association between the variables. The R Square value of .386 indicates that 38.6% of the variation in UCE performance is explained by human capital management practices, while the adjusted R Square of .381 confirms the stability of the model. The ANOVA results showed that the regression model was statistically significant ($F = 81.717$, $p < .001$), confirming that human capital management significantly predicts academic performance.

The coefficient results indicated that BOG was a significant predictor of UCE ($B = .751$, $\beta = .621$, $t = 9.040$, $p < .001$), meaning that improvements in human capital management practices lead to corresponding improvements in student performance. The regression equation, UCE = 0.553 + 0.751(BOG), further confirms the positive contribution of effective human resource practices to academic outcomes. Interview findings supported the quantitative results by revealing that schools employ a range of strategic human capital management practices aimed at teacher recruitment, development, and retention, though their effectiveness is constrained in rural contexts such as Mbale District. Recruitment strategies included external sourcing through online platforms, partnerships with teacher training institutions, and targeted head-hunting for key positions. However, persistent teacher shortages were attributed to weak retention mechanisms, particularly inadequate remuneration, delayed payments, and challenging working conditions. The respondent emphasized the role of continuous professional development, mentorship, and induction programs in enhancing teacher effectiveness and job satisfaction, while noting that improved infrastructure, availability of teaching materials, and provision of accommodation are critical for retaining teachers in rural schools. The respondent further linked stable and well-qualified teaching staff to improved student academic performance, reduced classroom disruption, and enhanced learner retention. Document analysis revealed that although schools allocate resources toward instructional materials, infrastructure development, ICT, and co-curricular activities, these allocations are insufficient to adequately address teacher shortages and improve academic outcomes. Budget reports and financial statements showed that increased student enrolment has strained existing resources, while government funding has not kept pace with growing institutional needs, resulting in recurrent budget deficits. Additionally, a disproportionate share of school funds is allocated to non-instructional expenditures such as administration, utilities, and support services, limiting investment in direct instructional and teacher support activities. This imbalance undermines the effectiveness of strategic human capital management efforts, particularly in addressing rural–urban disparities in teacher availability and academic performance.

9. Recommendations

9.1 To Evaluate Strategic Human Capital Management Practices on Teacher Shortages in Public Secondary Schools in Mbale District, Uganda

School leadership and education authorities should implement targeted recruitment strategies, particularly for rural and hard-to-staff schools, including partnerships with teacher training institutions, competitive incentives, and retention packages to address teacher shortages effectively.

Continuous Professional Development (CPD), mentorship, induction programs, and regular in-service training should be systematically implemented to improve teacher effectiveness, job satisfaction, and professional growth, thereby positively influencing student academic performance.

Schools should introduce and maintain both financial (e.g., timely salaries, hardship allowances) and non-financial incentives (e.g., housing, flexible schedules, recognition awards) to motivate teachers and reduce turnover, particularly in rural contexts where shortages are most acute.

School budgets and resource planning should prioritize human capital development, ensuring sufficient allocation for instructional materials, infrastructure, and support services that directly enhance teacher performance and retention, thereby bridging gaps in teaching quality and student outcomes.

10. Conclusion

10.1 To Evaluate Strategic Human Capital Management Practices on Teacher Shortages in Public Secondary Schools in Mbale District, Uganda

The study concludes that strategic human capital management practices in public secondary schools in Mbale District moderately address teacher shortages and contribute to enhancing academic performance, though their effectiveness is constrained by contextual challenges. The overall mean of 2.5139 and the predominance of agree and strongly agree responses indicate that respondents perceive schools as implementing human resource practices such as in-service training, performance appraisals, merit-based promotions, staff motivation mechanisms, and structured recruitment. Regression analysis further confirmed a moderately strong positive relationship between human capital management and students' academic performance, with 38.6% of the variation in UCE results explained by these practices, highlighting their significant but partial influence on outcomes. Interview findings revealed that recruitment, professional development, and retention strategies improve teacher effectiveness and satisfaction; however, rural schools continue to face challenges such as delayed remuneration, inadequate infrastructure, and limited non-monetary incentives, which contribute to persistent teacher shortages. Document analysis corroborated these insights, showing that while strategic resource allocation and staff development plans exist, their implementation is often insufficient to meet institutional needs.

10.2 Areas for Further Study

- Assessing the Role of Teacher Retention and Professional Development Programs in Reducing Rural Teacher Shortages and Improving Academic Performance.
- Evaluating the Influence of Equitable Resource Allocation on Bridging Rural–Urban Academic Performance Gaps in Secondary Education.
- The Interaction Between Strategic Planning, Human Capital Management, and Resource Allocation in Improving Student Performance in Rural Schools.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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