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Analyzing student retention trends in public schools across Kwara State Nigeria

Afeez Adeshina Shittu[1*], Muritala Adaramaja Sheu[2], Yusuf Abubakar Faruk[3]
[1]Department of Educational Management & Counselling, Al-Hikmah University, Ilorin, Nigeria
[2]Department of Educational Management, Kwara State University, Malete, Nigeria
[3]Department of Educational Management, University of Ilorin, Ilorin, Nigeria

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ABSTRACT

The student retention rate in public primary schools in Kwara State is influenced by differences in gender and location. Inequities in educational access between urban and rural areas, as well as differences in facilities, significantly affect students' continuation in school. This study aims to measure the retention rate of public primary school students in Kwara State based on gender, and the retention rate based on location. The research is a descriptive survey with a correlational design. The target population included all 230 public primary schools in six Local Government Areas (LGAs) selected from three senatorial districts in Kwara State. The instrument used was the Students' Flow Checklist (SFC). Data collected were analyzed using formulas, the standard progression method, the rate method, and the t-test. The findings showed a significant difference in retention rates between male and female students in Ilorin West and Asa LGAs in public primary schools in Kwara State. There was also a notable difference in retention rates between Ilorin West LGA (urban) and Asa LGA (rural). It is recommended that retention rates be maintained by providing more classrooms, utilizing available resources, and ensuring effective teaching to achieve educational goals for all students. This study contributes by identifying significant differences in student retention based on gender and location in Kwara State. These findings support efforts to improve retention through facility provision, resource utilization, and effective teaching in public primary schools.

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[*]**Corresponding Author**: Afeez Adeshina Shittu, Department of Educational Management & Counselling, Faculty of Education, Al-Hikmah University, Ilorin, Nigeria, email: aashittu@alhikmah.edu.ng

INTRODUCTION

The student retention rate in public primary schools is an important indicator of the internal efficiency of an education system. Ibrahim (2019) argues that the retention rate in Kwara State tends to vary from year to year. Abdulazeez (2021) observes that this rate fluctuates across Local Government Areas (LGAs), with significant differences between urban and rural schools as well as between male and female students. Atunde et al. (2023) and Olowolagba et al. (2025) state that some metropolitan LGAs, such as Ilorin West, have higher retention rates for male students, while rural LGAs, such as Asa and Pategi, show lower retention rates for female students. These differences reflect the complex interplay of socio-economic, cultural, and infrastructural factors that influence students' ability to remain within the education system. Despite Kwara State's commitment to universal basic education through the "Every Child Counts" policy, many students still fail to complete their junior secondary education. Experts, including Ige et al. (2024), Gold (2025), Olowonirejuaro (2021), and Salahu (2020), argue that retention challenges are driven by poverty, child labour, early marriage, and inadequate school conditions. Resource shortages in rural schools further exacerbate the situation, increasing repetition and dropout rates, ultimately lowering overall student retention.

Research indicates that high retention rates are crucial for achieving the objectives of Universal Basic Education (UBE), as they ensure students acquire foundational knowledge before progressing to senior secondary school or vocational training. Bamidele et al. (2024), Igweonu (2021), Onyekwena et al. (2017), and Salahu (2020) emphasize that retention is an indicator of school system efficiency, as it reduces dropout and wastage while promoting educational continuity and completion. However, research on retention in Kwara State remains limited. Jimoh et al. (2020) and Owhondah & Nwosu (2022) note that most studies are national or regional in scope, making them less specific for local policy interventions. Researchers have also found that retention in Kwara's junior secondary schools is hindered by socio-economic, infrastructural, and systemic challenges. Mohammed et al. (2022) and Nwoke et al. (2024) report that dropouts in rural areas are largely due to financial constraints, while Behounek (2020) and McCleary-Sills et al. (2015) highlight the impact of early marriage and gender-based violence on female students. Olawuyi et al. (2020) and Edungbola & Ene (2024) indicate gender disparities in retention, with urban areas showing higher female retention than rural ones.

Although various studies have highlighted the importance of student retention and its influencing factors, research specifically evaluating retention rates in public primary schools in Kwara State remains limited. Most studies are national or regional in scope and do not examine in detail the differences in retention based on gender or geographic location. While previous research has identified socio-economic, infrastructural, and systemic challenges, few studies have explored how these factors vary between male and female students or between schools in urban and rural areas. This gap creates a lack of knowledge regarding local retention dynamics, which is critical for policy interventions. Therefore, this study aims to address this gap by investigating retention trends in Kwara's public primary schools, analyzing gender disparities, and exploring variations in retention between urban and rural areas, thereby providing evidence-based insights to inform targeted strategies for improving student retention.

This study investigates student retention rates in public primary schools in Kwara State, focusing on two key factors: gender and location. It analyzes retention trends between male and female students, identifies gender gaps, and explores differences in retention between urban and rural areas. By examining these factors, the study aims to provide insights that can guide more targeted policy interventions to improve student retention in Kwara's public schools. Practically, the findings can serve as a reference for policymakers, local governments, and school administrators in designing strategies to enhance retention that consider gender and location differences. Academically, this study contributes to the literature on student retention in public primary schools, particularly regarding gender disparities and geographic variations, and provides a foundation for further research in basic education and educational policy.

Based on the research objectives, the preliminary conclusion indicates that student retention rates in Kwara State's public primary schools are likely influenced by gender and location, although these effects need to be tested statistically. This study proposes two main hypotheses: the first hypothesis (Ho1) states that there is no significant difference in retention rates based on gender across Kwara State's senatorial districts, while the second hypothesis (Ho2) states that there is no significant difference in retention rates based on location, whether urban or rural. Accordingly, this study aims to answer the following questions: (1) Is there a significant difference in retention rates between male and female students in Kwara State? and (2) Is there a significant difference in retention rates between students in urban and rural schools? The findings are expected to provide data to guide educational policies and more effective interventions to improve student retention and academic outcomes in the region.

RESEARCH METHOD

This study adopted a correlational research design within the ex-post facto framework, a method considered appropriate given that the data on enrolment, promotion, repetition, dropout, and completion rates had already been collected and could not be influenced by the researchers. According to Silva (2010), the expost facto approach is ideal for examining pre existing phenomena where manipulation is not possible. This design was selected to explore the relationships and differences in student retention rates, specifically focusing on gender and school location, during the 2013/2014 to 2019/2020 academic years. By employing a correlational approach, the study sought to identify patterns and relationships between key variables. As noted by Cardoso-Pulido et al. (2022), and further emphasized by Snyman and Jurie (2024), this design is valuable for understanding how external factors, like gender and location, may have impacted student retention. Hinduja et al. (2024) and Pacheco et al. (2025) similarly highlight the significance of such variables in retention studies.

The target population for this study consisted of 230 Public primary school across the three senatorial districts of Kwara State: Kwara Central, Kwara North, and Kwara South, with a total of 35,929 students enrolled in Junior Secondary School 3 (JSS3) during the study period. To ensure broad representation, a multi-stage sampling technique was applied, as advocated by Palinkas et al. (2015), who emphasized its effectiveness in capturing diverse groups. The first stage involved stratifying Kwara State into its three senatorial districts. In the next step, two Local Government Areas (LGAs) from each district were purposively selected to represent both urban and rural settings. The selected LGAs included Ilorin West and Asa from Kwara Central, Ifelodun and Isin from Kwara North, and Moro and Pategi from Kwara South. Wu et al. (2023) suggest that such purposeful selection helps in obtaining a comprehensive understanding of the target population by considering geographical and demographic differences.

The purposive sampling method was employed to address the urban-rural disparities in student retention rates, a key factor recognized in prior research for its significant impact on educational outcomes, as highlighted by Campbell et al. (2020). To ensure comprehensive data collection, the study utilized a total enumeration (census method) within the selected LGAs, a strategy recommended by Mujere (2016) for ensuring accuracy and completeness. All JSS3 students enrolled in the selected schools between the 2013/2014 and 2019/2020 academic years were included in the study. This approach enabled the researchers to gather a complete dataset, facilitating the tracking of student flow patterns across seven academic years, as emphasized by Lim (2024). Focusing on JSS3 students was critical for understanding retention at this pivotal stage, just before students transition to senior secondary education or vocational training, a juncture identified by educational researchers as crucial for shaping future academic trajectories.

Data for the study were collected using a structured instrument called the Students' Flow Checklist, a tool designed to extract annual records of student enrolment, promotion, repetition, dropout, and graduation from official school records, as recommended by McIntosh and Morse (2015). The collected data were validated by school administrators and the Kwara State Ministry of Education, ensuring accuracy and reliability, as emphasized by Cheong et al. (2023). For data

analysis, the study utilized both descriptive and inferential statistics. Descriptive statistics, including frequency counts, percentages, means, and standard deviations, were employed to summarize the data. Inferential statistics, such as retention rate formulas, standard progression methods, rate methods, and t-tests, were used to assess significant differences in retention across gender and school location at a 0.05 level of significance. Vetter (2017) and Cooksey (2020) argue that such methods are essential for making valid inferences about the factors influencing student retention in educational settings.

RESULTS AND DISCUSSION

Result

Gender-based retention rates of public primary school students in Kwara State

This study analyzed retention rates in public primary schools in Kwara State from the 2013/2014 to 2019/2020 academic sessions, focusing on gender-based trends. Retention rates for male and female students were compared across six selected Local Government Areas (LGAs) representing both urban and rural regions within the three senatorial districts. The study examined five student cohorts to identify gender disparities in school retention over time. By highlighting these differences, the research provides insights into how gender and location affect student progression and the internal efficiency of Kwara State's educational system. Findings inform targeted interventions to reduce gender-based retention gaps and improve overall retention.

Table 1

Retention Rate of Public Primary School Students in Kwara State by Gender

LGA	2013/2014		2014/2015		2015/2016		2016/2017		2017/2018	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Ilorin West	91%	75.8%	87.2%	93.2%	90.5%	96.6%	100%	98.5%	96.7%	88.8%
Asa	88.8%	53.4%	95%	99.8%	98.9%	95.8%	88.7%	94.8%	86.9%	93.2%
Ifelodun	93.2%	97.7%	90.6%	96.9%	94.6%	95.1%	89.6%	70.7%	75.5%	83.3%
Isin	48.3%	94.6%	98.4%	99.6%	99.1%	92.2%	99.3%	82.6%	56.1%	55.6%
Moro	80.8%	99.3%	96.3%	90%	99%	83.9%	92.5%	89.8%	87.8%	96.5%
Pategi	64.7%	95.1%	93.9%	99.5%	97.7%	93.4%	95.9%	91.9%	82.7%	69.3%
ARR	77.8%	85.9%	93.6%	96.5%	96.6%	92.8%	94.3%	88.1%	80.9%	81.1%

Table 1 shows the retention rate of the Public primary school students in Kwara State from 2013/14 to 2019/2020 for five cohorts based on gender. In the 2013/14 cohort, it was recorded that male and female students in Ifelodun LGA have the highest retention rate at 93.2% and 97.7% respectively. The average retention rate of female students was 85.9%, which was higher than that of male students at 77.8%. It was indicated that male students of Isin LGA have the highest retention rate, while female students of Asa LGA have the highest retention rate in the 2014/15 cohort. The average retention rate for female students was 96.5%, 93.6% higher than that of male students. The highest rate of male students' retention was recorded in Isin LGA at 99.1%, while female students in Ilorin West LGA have the highest retention rate at 96.6% in the 2015/16 cohort. The average retention rate for male students was 96.6%, and 92.8% for female students. In the 2016/17 cohort, male and female Ilorin West LGA students have the highest retention rate at 100% and 98.5%, respectively. The average retention rate of male students was 94.3%, which was higher than that of female students at 88.1%. It was recorded that male students of Ilorin West LGA have the highest retention rate at 96.7%, while female students of Moro LGA have the highest retention rate at 96.5% in the 2017/18 cohort. The average retention rate for female students was 81.1% higher than 80.9% of male students.

The data reveals significant gender-based differences in retention rates across various Local Government Areas (LGAs) in Kwara State. Female students generally exhibit higher retention rates compared to male students across all cohorts. For example, in the 2013/14 cohort, female students in Ifelodun LGA had a retention rate of 97.7%, surpassing male students at 93.2%. The highest retention rates for male students were consistently recorded in Isin LGA, while female students in Ilorin West

and Asa LGAs performed better in several cohorts. This trend highlights the potential influence of geographical factors, as well as gender-specific educational needs and support. The data also indicates that male students often lag behind in retention rates, suggesting that targeted interventions, including improved school mapping and tailored programs, may be necessary to address the retention gap and ensure equal educational opportunities for both genders.

Location-based retention rates of public primary school students in Kwara State

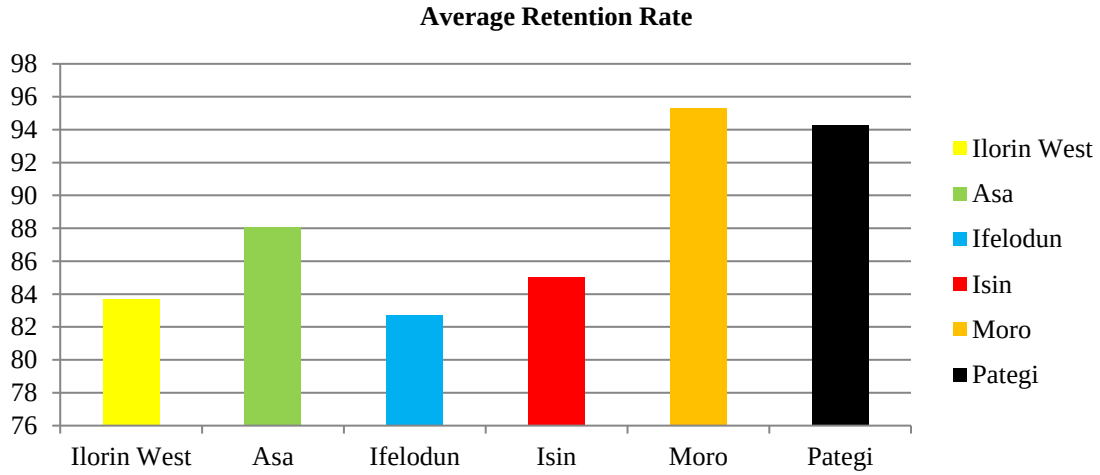
In addition to gender, the study examined retention rates based on school location urban versus rural within Kwara State. Location is critical, as disparities in infrastructure, teacher availability, and socio-economic conditions affect educational access and quality. The selected LGAs balance urban and rural areas across the three senatorial districts, enabling meaningful comparison. Table 2 shows retention rates from 2013/2014 to 2019/2020, highlighting location-based differences and potential policy intervention areas.

Table 2
Retention Rate of the Public primary school Students in Kwara State Based on Location

Senatorial Districts	Location	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	ARR
Kwara Central							
Ilorin West	Urban	98.9%	1.6%	68.9%	79.9%	99.4%	83.7%
Asa	Rural	59.2%	90.3%	94.1%	98.2%	98.6%	88.1%
Kwara South							
Ifelodun	Urban	99.9%	71.4%	99.2%	62.8%	80.3	82.7%
Isin	Rural	74.5%	99.5%	76.7%	87.8%	86.7%	85.0%
Kwara North							
Moro	Urban	97.7%	96.6%	98.5%	99.1%	84.8%	95.3%
Pategi	Rural	75.8%	100%	99.9%	99.5%	96.5%	94.3%

Table 2 presents the retention rates of Public primary school students in Kwara State from the 2013/14 to 2019/2020 cohorts based on location. Asa LGA, a rural area, recorded an average retention rate of 88.1%, which was higher than that of Ilorin West, an urban area, at 83.7%. Similarly, Isin LGA, a rural area, had an average retention rate of 85%, surpassing Ifelodun LGA, an urban area, with a rate of 82.7%. In contrast, Moro LGA, an urban area, exhibited the highest retention rate at 95.3%, which was higher than that of Pategi LGA, a rural area, at 94.3%. These findings suggest that while rural areas such as Asa and Isin show relatively strong retention rates, urban areas like Ilorin West and Ifelodun have lower rates. The data reflect a complex interaction between location and retention, emphasizing the need for targeted interventions to address disparities. The ARR was shown in Figure 1.

Figure 1
Average Retention Rate of Public Primary School Students in Kwara State



The first research hypothesis (Ho1) posits that there is no significant difference in the retention rates of students across the senatorial districts in Public primary school in Kwara State based on gender. This hypothesis suggests that male and female students exhibit similar retention patterns within the various senatorial districts, with no gender-based disparities in retention rates.

Student retention rate in senatorial districts of Kwara State by gender

To statistically determine whether differences in retention rates between male and female students were significant, hypothesis testing was conducted using the independent samples t-test. The analysis focused on comparing mean retention rates across the six selected Local Government Areas (LGAs) to test for gender-based disparities in student retention. The hypothesis tested was whether there was a statistically significant difference in the retention rates of male and female students in Public primary school across the senatorial districts of Kwara State. The results of this analysis, including means, standard deviations, calculated t-values, and significance levels (p-values), are presented in Table 3.

Table 3

Student Retention Rates in Senate Districts in Public Schools in the Country by Gender

LGA	Gender	N	Mean	SD	Cal. t-value	Crit. t-value	p-value
Ilorin West	Male	19682	19.34	3.89			
	Female	18920	18.89	2.38	4.82*	1.96	.004
Asa	Male	3475	12.01	2.88			
	Female	3467	8.78	3.85			
LGA	**Gender**	**N**	**Mean**	**SD**	**Cal. t-value**	**Crit. t-value**	**p-value**
Ifelodun	Male	4155	11.55	3.51			
	Female	4408	10.57	2.98	3.12*	1.96	.001
Isin	Male	1019	14.06	3.62			
	Female	1329	8.35	2.09			
LGA	**Gender**	**N**	**Mean**	**SD**	**Cal. t-value**	**Crit. t-value**	**p-value**
Moro	Male	3240	8.04	3.65			
	Female	3542	7.02	2.74	2.99*	1.96	.000
Pategi	Male	2149	5.42	2.63			
	Female	2529	8.78	2.60			

Table 3 presents the mean, standard deviation, and t-test results for significant differences in the retention rates of students based on gender across the senatorial districts in Kwara State's Public primary school. The calculated t-value of 4.82 exceeds the critical t-value of 1.96, with a corresponding p-value of 0.004, which is less than the 0.05 significance level. Therefore, the null hypothesis was rejected, indicating a significant difference in the retention rates of male and female students in Ilorin West and Asa LGAs. In the Ilorin West LGA, male students had a mean retention rate of 19.34, while female students had a mean of 18.89, with standard deviations of 3.89 and 2.88, respectively. In Asa LGA, male students showed a mean of 12.01, while female students had a mean of 8.78, with standard deviations of 2.38 and 3.85, respectively. These results suggest that gender plays a significant role in retention rates across these areas.

Similarly, the calculated t-value of 3.12 for Ifelodun and Isin LGAs is greater than the critical t-value of 1.96, with a p-value of 0.001, which is also below the 0.05 significance level. Therefore, the null hypothesis was rejected, indicating a significant difference in the retention rates of male and female students in both LGAs. In Ifelodun LGA, male students had a mean retention rate of 11.55, while female students had a mean of 10.57, with standard deviations of 3.51 and 2.98, respectively. In Isin LGA, male students showed a mean retention rate of 14.06, while female students had a mean of 8.35, with standard deviations of 3.62 and 2.09, respectively. Lastly, in Moro and Pategi LGAs, the calculated t-value of 2.99 exceeds the critical t-value of 1.96, with a p-value of 0.000, indicating

a significant difference in retention rates. These findings emphasize the need for gender-sensitive interventions to improve student retention.

The data from Table 3 demonstrates significant gender-based differences in student retention rates across multiple LGAs in Kwara State. The t-tests for Ilorin West, Asa, Ifelodun, Isin, Moro, and Pategi LGAs show calculated t-values that exceed the critical t-values, with corresponding p-values below the 0.05 significance level, leading to the rejection of the null hypothesis. This indicates a statistically significant difference in retention rates between male and female students. The means and standard deviations further highlight that female students tend to have higher retention rates in most LGAs, with notable variations between male and female students in different districts. These results suggest the need for gender-sensitive policies and targeted interventions to address the disparities in student retention, ensuring that both male and female students receive equal educational support and opportunities.

The second research hypothesis (Ho2) asserts that there is no significant difference in the retention rates of students across the senatorial districts in Public primary school in Kwara State based on location. This suggests that retention rates are similar between urban and rural areas within the state's various senatorial districts.

Retention rates of public junior secondary students in Kwara State by location

Following the gender-based analysis, a hypothesis test was conducted to determine the effect of school location (urban vs. rural) on student retention rates in Public primary school in Kwara State. Independent samples t-tests were used to compare the mean retention rates between urban and rural schools across the selected Local Government Areas (LGAs) in the three senatorial districts. The purpose of this analysis was to identify whether geographical factors contribute to variations in student retention, offering insights that could inform resource distribution and policy modifications. The findings from the location-based hypothesis test are presented in Table 4, highlighting the influence of school location on retention rates.

Table 4
Retention Rates of Students in Kwara's Public Schools by Location

LGA	Location	Schools	N	Mean	SD	Cal. t-value	Crit. t-value	p-value
Ilorin West	Urban	70	37540	20.48	3.45	2.03	1.96	.000
Asa	Rural	32	7402	14.48	8.05			
LGA	**Location**	**Schools**	**N**	**Mean**	**SD**	**Cal. t-value**	**Crit. t-value**	**p-value**
Ifelodun	Urban	57	8185	18.11	4.02	3.01	1.96	.000
Isin	Rural	23	2442	10.13	3.45			
LGA	**Location**	**Schools**	**N**	**Mean**	**SD**	**Cal. t-value**	**Crit. t-value**	**p-value**
Moro	Urban	27	6564	8.55	4.11	2.18	1.96	.000
Pategi	Rural	21	5001	7.67	3.06			

Table 4 presents the mean, standard deviation, and t-test results for significant differences in student retention rates based on location in Kwara State's Public primary school. The findings show that Ilorin West LGA, with 70 schools and a total retention of 37,540 students, and Asa LGA, with 32 schools and a retention of 7,402 students, exhibit a significant difference in retention rates. The calculated t-value of 2.03 exceeds the critical t-value of 1.96, with a p-value of 0.000, indicating a significant difference in retention rates between the urban Ilorin West and rural Asa LGA. The mean retention rates for Ilorin West and Asa LGA were 20.48 and 14.48, respectively, with standard

deviations of 3.45 and 8.05. This demonstrates that location plays a significant role in determining retention rates in urban and rural settings.

In addition, the calculated t-value of 3.01 for Ifelodun LGA (57 schools, 8,185 students) and Isin LGA (23 schools, 2,442 students) is greater than the critical t-value of 1.96, with a p-value of 0.000, further rejecting the null hypothesis. This indicates a significant difference in retention rates between the urban Ifelodun and rural Isin LGAs. The mean retention rates for these LGAs were 18.11 and 10.13, with standard deviations of 4.02 and 3.45, respectively. Similarly, in Moro LGA (27 schools, 6,564 students) and Pategi LGA (21 schools, 5,001 students), the t-value of 2.18 exceeds the critical t-value of 1.96, with a p-value of 0.000. The mean retention rates were 8.55 for Moro and 7.67 for Pategi, with standard deviations of 4.11 and 3.06, respectively. These results highlight the impact of geographic location on student retention in both urban and rural areas.

The data clearly indicates significant differences in student retention rates between urban and rural areas in Kwara State's Public primary school. In each of the three LGAs Ilorin West, Ifelodun, and Moro (urban) compared to Asa, Isin, and Pategi (rural) the calculated t-values exceed the critical t-values, and the corresponding p-values are below 0.05, rejecting the null hypothesis. This suggests that location plays a crucial role in retention rates, with urban areas generally exhibiting higher retention. For instance, Ilorin West had the highest retention, while rural LGAs like Asa, Isin, and Pategi showed lower retention rates. These findings highlight the need for targeted interventions in rural areas to improve retention, such as better facilities, access to resources, and tailored educational support to bridge the gap between urban and rural retention rates.

Discussion

Difference in student retention based on gender in schools

The results of the first hypothesis test reveal a significant difference in retention rates between male and female students in Ilorin West and Asa LGA in Kwara Province. This study highlights that the difference in retention is reflected in the average scores of male and female students, suggesting the influence of gender on educational sustainability. Ifebuzor et al. (2015) argue that effective school mapping must take gender differences into account to design more targeted interventions aimed at improving retention. Understanding these gender-specific retention differences is crucial for schools to optimally allocate resources and ensure the continuity of education for both male and female students, as emphasized by Jauhiainen and Guerra (2023). For instance, Moores and Burgess (2022) propose that allocating scholarships or learning programs tailored to each gender's specific needs can greatly enhance retention. This approach can provide more equitable educational opportunities, improving retention rates across genders.

In Ifelodun and Isin LGAs, a difference in retention rates between male and female students was also found. The study suggests that despite the different social and geographical characteristics of both LGAs, gender remains a key factor influencing student retention, as noted by Fortes et al. (2022). Male and female students show distinct average retention scores, supporting Akudo et al.'s (2021) argument that school mapping sensitive to gender factors can enhance overall retention. This difference may stem from disparities in educational opportunities, gender-specific programs, or varying levels of family support for male and female children, as explained by Dost et al. (2023). Consequently, Bustamante-Mora et al. (2024) stress the need for schools and governments to design inclusive policies that consider gender, ensuring equality in education and improving student retention across both regions. This approach is essential for addressing gender-related educational challenges and ensuring better retention outcomes.

This study also found a significant difference in retention rates between male and female students in Moro and Pategi LGAs. The results show that in both regions, male and female student retention is imbalanced, with one gender possibly having a lower retention rate, as noted by Horrocks et al. (2024). These findings align with Ifebuzor et al. (2015), who highlight the importance of school mapping that takes gender differences into account to improve retention rates. In areas such as Moro, which is more urban, and Pategi, which is more rural, external factors such as access to adequate

educational facilities, parental involvement, and gender-based education programs can influence retention rates, as explained by Egara and Mosimege (2023). Therefore, Khatri et al. (2024) argue that the government and schools should focus on developing more adaptive policies to support gender-based student retention, and allocate the right resources to address the gaps in both regions.

The findings of this study indicate that gender is a significant factor influencing student retention across the selected LGAs in Kwara State. Differences in retention rates between male and female students were observed in Ilorin West, Asa, Ifelodun, Isin, Moro, and Pategi, highlighting that gender disparities persist regardless of social or geographical context. The study demonstrates that gender-sensitive school mapping and resource allocation, including targeted programs, scholarships, and support initiatives, are essential to address these imbalances. These results underscore the need for inclusive educational policies and interventions that consider gender-specific challenges, ensuring equitable access to education and improving overall student retention across both urban and rural areas in Kwara State.

School mapping to improve student retention efficiency

The findings of this study highlight the critical role of school mapping in enhancing student retention rates, regardless of gender. In line with Deroncele-Acosta and Ellis (2024), school mapping provides a comprehensive understanding of student distribution, available resources, and the unique challenges each school faces. Similarly, Ifebuzor et al. (2015) suggest that mapping is essential for identifying specific school needs, including facilities, support programs, and policy measures necessary to improve retention. Comparatively, the absence of systematic mapping, as noted by Darling-Hammond et al. (2019), can obscure schools requiring targeted interventions, particularly in low socio-economic areas, which aligns with this study's observation that retention gaps are more pronounced in underserved regions.

This study's findings underscore that school mapping is a critical tool for enhancing student retention by identifying the resources necessary to address gaps. Gonçalves et al. (2024) interpret school mapping as a means to systematically reveal which resources are required to improve retention. Similarly, Villegas-Ch et al. (2023) argue that mapping helps uncover factors influencing retention, including educational facilities, qualified teachers, and family support, which aligns with this study's observations in Kwara State. Ifebuzor et al. (2015) emphasize that accurate mapping is essential for targeting schools with low retention rates, highlighting the importance of prioritizing resources where they are most needed. In comparison, James et al. (2024) suggest that addressing these deficiencies through informed interventions fosters supportive learning environments, keeping students engaged and promoting long-term educational success, which corroborates the retention patterns observed in this research.

The findings of this study align with the perspective that student retention rates serve as a key indicator of a school's internal efficiency, as noted by Adeyemi (2007), who interprets retention as a reflection of effective resource management and operational capacity. Similarly, Juwarti and Octafian (2025) argue that schools with higher retention rates often demonstrate superior efficiency in teaching, student support, and overall management, which corresponds with the trends observed in this research. See et al. (2020) further suggest that accurate school mapping enables targeted resource allocation, such as tailoring learning programs or providing additional support to at-risk students, supporting the study's finding that retention improves when interventions are data-informed. Comparatively, du Plooy et al. (2024) assert that school mapping not only enhances retention but also contributes to broader educational quality improvements, reinforcing the relevance of strategic mapping in addressing retention challenges identified in this study.

The findings of this study demonstrate the crucial role of school mapping in improving student retention rates by identifying resources and challenges regardless of gender. School mapping provides a detailed understanding of student distribution and school needs, enabling targeted interventions for schools with low retention. Without systematic mapping, schools in disadvantaged areas may be overlooked, exacerbating retention gaps. Accurate mapping allows for the effective allocation of

resources, including facilities, support programs, and learning initiatives, fostering supportive learning environments. By addressing specific challenges and optimizing resource management, school mapping enhances student engagement, educational continuity, and long-term academic success. These results highlight its critical contribution to improving retention rates and addressing disparities in both urban and rural schools in Kwara State.

Impact of geographical location on student retention in urban and rural schools

This study revealed a significant difference in student retention rates between urban schools (Moro LGA) and rural schools (Pategi LGA), indicating that location influences educational outcomes. Johnson et al. (2021) interpret these disparities as a reflection of how urban and rural contexts shape retention patterns, which aligns with the current findings. Urbańska et al. (2022) further argue that geographical factors affect the sustainability of students' education, highlighting the role of infrastructure, accessibility, and socio-economic conditions in retention. Wanti et al. (2022) suggest that the availability of adequate educational facilities and support systems is critical, supporting the observed differences between urban and rural schools. Yusuf and Akinniranye (2011) emphasize that school mapping is essential for identifying areas requiring targeted intervention, a notion corroborated by this study, which shows that strategic policies are needed to ensure equitable retention and educational opportunities across all locations.

This study's findings underscore the critical role of school mapping in educational planning, particularly for improving student retention. Zangana et al. (2024) interpret mapping as essential for determining school locations and the distribution of facilities, which resonates with the patterns observed in Kwara State. Cohen et al. (2009) emphasize that accurate mapping helps identify areas requiring additional attention, particularly those with low retention rates, a point supported by this study's data. Harackiewicz et al. (2016) further argue that mapping enables more efficient allocation of resources, including classrooms, scholarships, and teacher training, aligning with findings that targeted support enhances retention. In densely populated urban areas with limited facilities, Shaıbou (2024) suggests that strategic mapping can guide interventions to reduce disparities, which corresponds with this study's observation that urban rural differences significantly affect retention. Overall, school mapping facilitates equitable resource distribution, supporting student retention and contributing to improved educational quality.

The findings of this study align with the view that urban schools often face challenges related to facilities and infrastructure due to high enrollment, as noted by Ewendu and Olubor (2020), which corresponds with the lower retention trends observed in densely populated areas of Kwara State. Kamrath and Bradford (2020) interpret such shortages as factors that negatively affect education quality and, consequently, student retention. Yli-Panula et al. (2020) further argue that geographical location significantly influences the effectiveness of education delivery, reinforcing the importance of considering urban–rural differences. While urban schools must optimize resource management to sustain quality and improve retention, rural schools often need targeted interventions to enhance facilities and accessibility, as highlighted by Mncube et al. (2023) and Thelma et al. (2024). Addressing these contextual disparities can help both urban and rural schools increase retention rates and provide more equitable access to quality education.

The findings of this study reveal a significant disparity in student retention rates between urban and rural schools in Kwara State, highlighting the influence of geographical and socio-economic factors on educational outcomes. Urban schools, such as those in Moro LGA, tend to have higher retention rates compared to rural schools like those in Pategi LGA, reflecting challenges related to infrastructure, facilities, and resource availability. The study underscores the importance of school mapping as a strategic tool for targeted intervention, resource allocation, and educational planning to bridge retention gaps. Addressing contextual differences through improved facilities, accessibility, and support systems in both urban and rural schools is essential to promote equitable educational opportunities and enhance retention rates across diverse settings.

CONCLUSION

The findings of this study reveal a significant disparity in retention rates between male and female students in Public primary school in the LGAs of Ilorin West, Asa, Ifelodun, Isin, Moro, and Pategi in Kwara State. This disparity reflects a clear difference in retention rates between male and female students in each of these areas. Furthermore, the study also uncovers significant differences in retention rates between urban and rural areas in Kwara State. In the Local Government Areas of Ilorin West (urban) and Asa (rural), Ifelodun (urban) and Isin (rural), as well as Moro (urban) and Pategi (rural), student retention rates show distinct differences. This suggests the influence of geographical and socio-economic factors on student retention in both types of regions.

Based on the findings of this study, the theoretical and practical implications of the recommendations are as follows: Theoretically, improving educational facilities and geographical accessibility plays a key role in enhancing student retention, regardless of gender. Increasing classroom space and utilizing available resources are relevant strategies to support effective teaching and learning processes. Practically, this recommendation highlights the need for collaboration between the Kwara State Universal Basic Education Board (KSUBEB), education planners, and school managers to ensure better accessibility for students in Public primary school. By ensuring that schools are located closer to students' homes, it can reduce long travel distances and increase enrollment and retention rates in these areas, thus supporting the achievement of more equitable and sustainable education.

The limitations of this study include its scope, which is limited to certain regions in Kwara State, and thus the results may not fully represent conditions in other parts of Nigeria or countries with different socio-economic characteristics. Additionally, this study did not consider other factors that may influence student retention, such as government policies or local cultural factors that may play a role. Therefore, future research is recommended to expand the sample across various regions, both urban and rural, and to explore other external factors, such as parental involvement, educational policies, and socio-economic conditions, that may impact student retention rates. A more comprehensive study would provide a more holistic understanding of the factors influencing student retention in diverse contexts.

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