

Social school environment and the academic performance of pupils in rural public primary schools. A cross-sectional study.

Lydia Namirembe*, Dr. Doreen Ankunda, Edmand Bakashaba
School of Graduate Studies and Research, Team University

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Abstract

Background

Despite efforts by government and school administrators to improve learning conditions, academic outcomes in rural primary schools remain low, particularly in literacy, numeracy, attendance, and national examination performance. This study examined the influence of the social school environment on the academic performance of pupils in public primary schools in Kakiri Sub-County, Wakiso District.

Methodology

The study adopted a correlational and cross-sectional research design within a mixed-methods design. A sample of 248 respondents was selected using stratified random sampling for teachers and pupils, and purposive sampling for head teachers. Data were collected through structured questionnaires, semi-structured interviews, and documentary reviews, and analysed using descriptive and inferential statistics (Pearson's correlation) for quantitative data, and thematic analysis for qualitative data.

Results

Most pupils aged 13–14 years (56%) and having attended their schools for 2–5 years (61%). Teachers were predominantly male (61%). There was a moderately positive social interaction, with supportive teacher–pupil relationships (Mean = 3.92) and respectful peer interactions (Mean = 3.78). However, guidance and counselling services (Mean = 3.05) and bullying prevention (Mean = 3.28) were weak. Academic performance indicators were generally low, with poor literacy, numeracy, test performance, and PLE outcomes (overall mean = 2.84). Correlation results revealed a significant positive relationship between the social school environment and academic performance ($r = 0.60$, $p < 0.01$). Regression analysis revealed that the school environment accounted for 55% of the variance in academic performance ($R^2 = 0.55$), with the social environment emerging as a significant predictor ($\beta = 0.34$, $p < 0.01$).

Conclusion

The study established that supportive social interactions enhance pupil performance, while weak counselling services, irregular attendance, and low parental involvement hinder academic achievement.

Recommendation

The school should strengthen its guidance and counselling programs, improve teacher-parent communication, reduce class sizes, and enforce anti-bullying measures.

Keywords: Social school environment, academic performance, parental involvement, teacher–pupil relationships, public primary schools, Kakiri Sub-County

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Corresponding Author: Lydia Namirembe

Email: lydiaddamulira17@gmail.com

School of Graduate Studies and Research, Team University

Background

Social environmental factors refer to the interpersonal and relational dynamics within the school setting that influence pupils' behaviour, attitudes, and learning outcomes. These include teacher-pupil interactions, peer relationships, school leadership, classroom discipline, parental involvement, and the general social climate within the school. In rural public primary schools, the quality of these social factors often determines whether pupils remain motivated, engaged, and

emotionally supported throughout their educational journey (Turyahikayo, 2021).

One of the most influential social elements in a school is the teacher-pupil relationship. Research consistently shows that positive, respectful, and supportive interactions between teachers and learners are associated with increased motivation, confidence, and academic achievement (Nabweire & Kiggundu, 2022). In contrast, negative social environments characterised by harsh discipline, emotional neglect, or teacher absenteeism have been linked to poor performance, low self-esteem, and high dropout rates. In

rural schools, where teacher shortages and overcrowded classrooms are common, meaningful teacher-pupil engagement is often limited, affecting both the delivery of instruction and pupils' willingness to learn (Mugisha, 2022). Peer relationships also play a critical role in shaping academic performance. A school culture that promotes collaboration, mutual respect, and inclusivity encourages pupils to engage actively in classroom activities and group learning. However, in settings where bullying, exclusion, or social stigma prevail, often due to socio-economic disparities or cultural differences, pupils may become disengaged, withdrawn, or anxious, leading to poor academic outcomes (UNESCO, 2022). Rural pupils, particularly those from disadvantaged backgrounds, may struggle to fit into peer groups, further isolating them from the learning process.

School leadership and the broader school climate significantly influence the social environment of a school. Effective school management fosters professionalism among staff, encourages community participation, and ensures that discipline is maintained in a way that supports learning rather than punishes failure. In poorly managed rural schools, however, weak administrative structures often lead to disorganisation, low staff morale, and poor communication—all of which negatively affect the social and academic atmosphere of the school (MoES, 2023).

Furthermore, parental and community involvement in school life, though often limited in rural areas, has been shown to boost learners' academic success. When parents participate in school activities, support homework, or attend meetings, pupils are more likely to attend regularly and perform better (Muwanga & Kasule, 2021). Unfortunately, in rural regions such as Kakiri Sub-County, low literacy levels among parents and limited resources often prevent meaningful engagement with schools, depriving pupils of critical social support.

In summary, the social environment within schools significantly contributes to pupils' academic outcomes. In the context of rural public primary schools, fostering positive relationships, inclusive peer interactions, and supportive leadership can improve learning outcomes despite challenges in infrastructure or resources. This study examined the influence of the social school environment on the academic performance of pupils in public primary schools in Kakiri Sub-County, Wakiso District.

Methodology.

Research Design.

This study adopted a correlational and cross-sectional research design, utilising a mixed-methods approach. The chosen design was appropriate for investigating the relationship between school environmental factors (physical, social, and psychological) and the academic performance of pupils in rural public primary schools in Kakiri Sub County, Wakiso District. The study employed a mixed-methods research approach, combining both quantitative and qualitative data collection and analysis. The quantitative aspect involved the use of structured questionnaires and document review (examination records) to generate measurable data on environmental factors and academic performance. The qualitative aspect included interviews and focus group discussions with selected teachers, head teachers, and pupils to provide contextual depth and richer insights into the experiences, perceptions, and underlying factors influencing learning outcomes.

Target population.

The study population comprised key stakeholders involved in the teaching and learning process in rural public primary schools within Kakiri Sub County, Wakiso District. Specifically, the population included head teachers (from St. Francis Kabagezi Primary School, St. Kizito Buzimba Primary School, Kamuli Nalinya Primary School, Kikandwa Baptist Primary School, Kikandwa C/U Primary School, St. Kizito Lubbe Primary School, Kakiri Army Primary School, Gobero Primary School, Buwanuka Primary School, and St. Anne Naddangira Primary School), teachers, and Primary Seven (P.7) pupils (2025). The total target population was 700 individuals, drawn from ten selected rural UPE schools. The selection of these categories of participants was informed by their direct involvement in or experience with school environmental factors and academic performance.

Head teachers formed a critical part of the study population, as they were the administrative leaders responsible for overseeing the implementation of school policies, resource allocation, and the overall management of the school environment.

Teachers were the primary implementers of the curriculum and interacted directly with pupils on a daily basis. They were uniquely positioned to observe how the school's physical, social, and psychological environments influenced teaching and learning.

Pupils in Primary Seven (P.7) constituted the largest group in the study population, given that they were at the final stage of primary education and had the most extensive exposure to school environmental conditions.

Table 1: Target Population, sample size, Sampling Technique, Methods of Data Collection

Category of Respondents	Population	Sample size	Sampling technique	Methods of data collection
Head Teachers	10	3	Purposive sampling	Interview
Teachers	100	35	Stratified sampling	Questionnaire
Upper Primary Pupils (P.7)	590	210	Stratified sampling	Questionnaire
Total	700	248		

Source: Wakiso District Education Department (2024)

Sample Size

The sample size for this study was determined using the Krejcie and Morgan (1970) Table of Sample Size Determination, which provided a scientifically valid method for selecting sample sizes from known populations. This table was widely accepted in educational and social science research due to its simplicity, accuracy, and reliability in guiding researchers to determine appropriate sample sizes that yielded generalizable results.

Based on the total accessible population of 700 individuals, the Krejcie and Morgan table recommended a sample size of 248 respondents. This sample size was considered adequate for drawing statistically valid inferences with a 95% confidence level and a margin of error of $\pm 5\%$. The sample was proportionately distributed among the three categories of respondents: head teachers, teachers, and Primary Seven (P.7) pupils, as follows:

Head Teachers (N = 10): A purposive sample of 3 head teachers was selected to provide qualitative insights. Teachers (N = 100): A stratified random sample of 35 teachers was selected across the 10 schools. P.7 Pupils (N = 590): A stratified sample of 210 pupils was selected to ensure representation across schools and gender.

Sampling Techniques

The study employed a combination of probability and non-probability sampling techniques, specifically stratified random sampling and purposive sampling, to select participants from the targeted population.

Stratified Random Sampling

Stratified random sampling was used to select both teachers and Primary Seven (P.7) pupils. This method involved dividing the target population into distinct subgroups or strata based on specific characteristics such as school, grade level, or gender. From each stratum, a random sample was then selected proportionately.

For teachers, each of the selected rural public primary schools represented a stratum. A proportionate number of

teachers (typically 3–4 per school, depending on staff size) were randomly chosen to ensure broad representation across different grade levels and subject areas.

For P.7 pupils, the stratum was based on school and gender to ensure balanced representation. Equal numbers of male and female pupils were randomly selected from each of the ten schools, ensuring that pupil experiences were captured across gender and institutional contexts.

Purposive Sampling

Purposive sampling was used to select head teachers, given their unique roles and responsibilities in school management. This non-probability technique allowed the researcher to deliberately select three (3) head teachers from the ten targeted schools based on their experience, knowledge, and accessibility. These individuals were considered information-rich cases, capable of providing in-depth qualitative data on how school environmental factors affected academic performance at the institutional level. Purposive sampling was appropriate in this case because head teachers possessed managerial oversight and detailed institutional memory, which was essential for understanding structural and systemic issues related to school environments.

Sources of Data

The study utilized two main sources of data i.e. primary data and secondary data, to comprehensively examine the relationship between school environmental factors and the academic performance of pupils in rural public primary schools in Kakiri Sub-County, Wakiso District.

Primary Data

Primary data were collected directly from the field through the administration of questionnaires and interviews with key respondents. These data provided firsthand information from teachers, Primary Seven (P.7) pupils, and head teachers regarding their experiences, perceptions, and

evaluations of the school environment and its influence on pupils' academic performance.

Teachers and pupils responded to structured questionnaires containing both closed- and open-ended items designed to capture quantitative and qualitative aspects of physical, social, and psychological environmental factors.

Head teachers participated in semi-structured interviews, which allowed for more in-depth exploration of school management practices, infrastructural conditions, and strategies that affected learner performance.

The primary data formed the core of the empirical evidence upon which the study's findings and conclusions were based.

Secondary Data

Secondary data were obtained from existing records, official reports, and previous studies relevant to the academic performance of pupils and the school environment in Uganda. These included:

Pupils' academic performance records, such as report cards and Primary Leaving Examination (PLE) results.

School inspection reports, staff attendance records, and infrastructure audit documents from the Ministry of Education and Sports (MoES), Wakiso District Education Office, and individual schools.

Published literature, including academic journals, government policy papers, and reports by NGOs such as UNESCO, UNICEF, and the World Bank, provided context and supported the interpretation of primary data.

Secondary data served to validate and complement the findings derived from primary sources, as well as to provide historical and policy context for the state of academic performance and school environments in rural Uganda.

Data Collection Instruments

To obtain comprehensive, valid, and reliable data, the study utilised three main data collection instruments: questionnaires, an interview guide, and a documentary review checklist. These instruments were developed in alignment with the study objectives and research questions and were tailored to suit the characteristics and roles of the different respondent categories. The use of multiple instruments supported data triangulation and enhanced the credibility of the findings.

Questionnaires

Structured questionnaires were administered to teachers and Primary Seven (P.7) pupils to collect quantitative and qualitative data on the school environmental factors influencing academic performance. The questionnaire included Likert-scale items ranging from Strongly Agree to Strongly Disagree, along with multiple-choice questions and

a few open-ended items for more detailed responses. The questionnaires were pilot-tested in a similar rural setting before the actual data collection to enhance validity and reliability.

Interview Guide

An interview guide was used to collect qualitative data from head teachers through semi-structured interviews. The interview guide contained open-ended questions designed to explore in depth the head teachers' views on school infrastructure, teacher availability, management practices, pupil welfare, and challenges that affected academic performance in rural schools.

Documentary Review Checklist

A documentary review checklist was developed and used to systematically examine relevant school records and official documents. The checklist guided the researcher in reviewing documents such as: pupil performance records (report cards, PLE results), attendance registers, school inspection reports, teacher deployment schedules, infrastructure and facilities report, and UPE policy implementation documents.

Validity of Instruments

To ensure that the data collection instruments accurately measured what they were intended to measure, the validity of the instruments was established through both content validity and expert judgment. Validity was a critical component in the research, as it determined the extent to which the instruments truly captured the constructs under investigation, in this case, school environmental factors and academic performance.

Content Validity

Content validity was ensured by carefully aligning all questionnaire items, interview questions, and documentary review checklist components with the study's specific objectives and conceptual framework. Each item was designed to reflect aspects of the three main environmental factors under study (physical, social, and psychological) and their relationship with academic performance.

A table of specifications was developed to map the research objectives against each item in the instruments. This helped confirm that all relevant areas were adequately covered and that there was a logical representation of the study variables.

Expert Review

The instruments were subjected to expert validation by a panel of professionals in the fields of educational research, curriculum studies, and measurement and evaluation. These experts were selected from academic staff at reputable institutions such as universities and teacher training colleges. They were asked to review the instruments for: relevance and clarity of items, appropriateness of language for target respondents, logical flow and structure of questions, and completeness in addressing study objectives. Feedback from these reviewers was analyzed and incorporated to revise and refine the instruments before field administration.

Pilot Testing

A pilot test was also conducted using a small, representative sample drawn from rural public primary schools with similar characteristics to those in Kakiri Sub-County. The pilot helped identify ambiguous or unclear items, tested the time required to complete the questionnaires or interviews, and assessed the general usability of the instruments.

The results of the pilot study were not included in the final analysis but guided the modification of items to enhance clarity, coherence, and alignment with the research goals. Based on pilot feedback, problematic questions were revised or eliminated.

Reliability of Instruments

Reliability referred to the consistency, stability, and dependability of an instrument in measuring what it was intended to measure over time and across various conditions. In this study, the reliability of the data collection instruments (questionnaires, interview guide, and documentary review checklist) was determined using pilot testing and statistical analysis, specifically through the calculation of Cronbach's alpha coefficient for internal consistency.

Pilot Testing

Prior to the main data collection, a pilot study was conducted with a small group of participants selected from public primary schools similar in characteristics to those in Kakiri Sub-County. The pilot group included teachers and Primary Seven pupils who were not part of the main study sample.

The pilot exercise tested the consistency of responses, identified ambiguous or unclear items, and assessed the overall usability of the instruments. Adjustments were made to refine any questions that appeared to be misunderstood, repetitive, or irrelevant, ensuring that the final instruments were clear, coherent, and stable.

Internal Consistency (Cronbach's Alpha)

For the questionnaire items, Cronbach's alpha coefficient was calculated to assess internal consistency reliability. This statistical measure evaluated how well the items in a given scale or section of the questionnaire measured the same underlying construct (physical, social, or psychological environmental factors).

A Cronbach's alpha value of 0.70 or higher was considered acceptable for indicating adequate reliability (Tavakol & Dennick, 2011). In this study, a Cronbach's alpha coefficient value of 0.9 was obtained, indicating a very high degree of consistency among the questionnaire items. Values closer to 1.0 suggest a strong internal consistency. If the alpha coefficient had fallen below the acceptable threshold, items contributing to low reliability would have been reviewed and revised or removed.

Reliability of Interviews and Document Checklists

While interviews and documentary reviews are qualitative tools and not typically subjected to statistical tests of reliability, consistency was ensured through:

Use of a standardised interview guide, which was applied uniformly across all head teacher respondents, to maintain consistency in question delivery.

Triangulation, by comparing data from interviews, questionnaires, and document reviews to ensure consistency and accuracy of responses.

Inter-coder reliability during analysis, whereby multiple researchers or supervisors reviewed the interpretation of qualitative responses to minimise subjectivity and bias.

Data Analysis

The study employed both quantitative and qualitative data analysis methods in line with its mixed methods research approach. This dual strategy allowed for a comprehensive understanding of the relationship between school environmental factors and the academic performance of pupils in rural public primary schools in Kakiri Sub County, Wakiso District.

Quantitative Data Analysis

Quantitative data were collected primarily through structured questionnaires administered to teachers and Primary Seven pupils. The data were coded, cleaned, and entered into the Statistical Package for Social Sciences (SPSS) software, version 26, for analysis.

Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the demographic characteristics of respondents and to provide a general overview of their responses to items related to physical, social, and psychological school environmental factors.

To examine the relationships between school environmental factors and pupils' academic performance, inferential statistical techniques such as Pearson's correlation coefficient were used. This helped determine the strength and direction of associations between independent variables (environmental factors) and the dependent variable (academic performance).

Where applicable, additional analyses such as linear regression were performed to assess the predictive power of school environmental factors on academic outcomes. The level of significance was set at $p < 0.05$.

Qualitative Data Analysis

Qualitative data were collected through semi-structured interviews with head teachers and through documentary review. These data sources provided in-depth insights into how school environmental conditions affected learning and academic performance in rural schools.

The qualitative data were analysed using thematic analysis. The process involved the following steps:

1. Transcription of interview recordings and review notes.
2. Familiarisation with the data through repeated readings.
3. Coding of significant statements and phrases relevant to the study objectives.
4. Grouping of codes into themes that reflected patterns in participant experiences and perceptions.
5. Interpretation of themes in light of the study's conceptual framework and theoretical underpinnings.
6. Emerging themes were triangulated with quantitative findings to enhance the credibility and depth of the results. Direct quotations from respondents were also used to illustrate key findings and give voice to participant experiences.

Ethical Considerations

Table 2: Response Rate of the Study

Category of Respondents	Interviews Scheduled / Questionnaires to be Issued	Interviews Conducted / Questionnaires Returned	Response Rate (%)
Head Teachers	3	3	100
Teachers	35	30	86
Upper Primary Pupils (P.7)	210	197	94
Total	248	230	93

Source: Primary data (2025)

Ethical integrity was a fundamental principle guiding all stages of this study, from research design to data collection, analysis, and dissemination of findings. The study adhered to the established ethical standards in educational research to ensure the protection, dignity, and rights of all participants involved, particularly considering the involvement of minors (pupils).

Prior to conducting the study, ethical clearance was sought from the University Research Ethics Committee. An official introductory letter was also obtained from the university to introduce the researcher to relevant educational authorities and schools within Kakiri Sub-County, Wakiso District. Permission to conduct the research was formally requested from the District Education Officer (DEO) and from the school head teachers of the selected rural public primary schools.

Participation in the study was voluntary, and informed consent was obtained from all adult participants, including teachers and head teachers. For pupils, whose participation involved additional ethical sensitivity due to their minor status, informed assent was sought from the pupils themselves, and parental or guardian consent was obtained through formal communication facilitated by the school.

All participants were briefed in clear, age-appropriate language about the purpose of the study, their role in it, the data collection methods, and their right to withdraw at any time without penalty.

To maintain anonymity, participants were not required to disclose identifying personal information such as names or addresses in questionnaires or interview responses. All data collected was treated as confidential and was securely stored in password-protected digital formats and locked storage for physical copies.

During data analysis and reporting, pseudonyms or participant codes were used to ensure that individuals and institutions could not be identified. Results were presented in aggregate form to further protect identities.

Results

Response Rate

The response rate was determined using the formula;

$$\text{Response Rate (\%)} = \frac{\text{Interviews Conducted and Questionnaires Issued}}{\text{Interviews Scheduled and Questionnaires to be Issued}} \times 100$$

Table 2 presents the response rate for the study. Out of the three (3) head teachers targeted, all participated in the study, yielding a 100% response rate. Among the thirty-five (35) teachers who were issued questionnaires, thirty (30) returned completed forms, representing an 86% response rate. For the Primary Seven (P.7) pupils, 197 out of 210 questionnaires were completed and returned, giving a

response rate of 94%. Overall, a total of 230 respondents participated out of the 248 targeted, resulting in an overall response rate of 93%.

The high response rates across all categories of respondents indicated active participation and cooperation, which enhanced the reliability and representativeness of the collected data for analysis.

Table 3: Demographic Characteristics of P.7 Pupils (n = 197)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	102	52
	Female	95	48
Age (years)	11–12	50	25
	13–14	110	56
	15+	37	19
Years Spent at This School	Less than 2 years	30	15
	2–5 years	120	61
	More than 5 years	47	24
Position in Last Term's Class Ranking	1st–5th	25	13
	6th–10th	50	25
	11th–20th	70	36
	Not sure	52	26

Source: Primary data (2025).

Demographic Characteristics of Respondents

Table 3: In terms of age, the majority of pupils, 110 (56%), were between 13 and 14 years old, followed by 50 pupils (25%) aged 11–12 years, and 37 pupils (19%) aged 15 years and above. This shows that most participants were within the typical age range for Primary Seven in the study area. Concerning the number of years spent at the school, 120 pupils (61%) had attended the school for 2–5 years, 47 pupils (24%) had been at the school for more than five years, and 30 pupils (15%) had spent less than two years. This suggests that the majority of pupils had substantial exposure

to the school environment, which is relevant to understanding its influence on academic performance.

Finally, regarding pupils' position in last term's class ranking, 70 pupils (36%) were ranked between 11th and 20th, 50 pupils (25%) between 6th and 10th, 25 pupils (13%) between 1st and 5th, while 52 pupils (26%) were unsure of their position. This indicates a range of academic performance levels among the respondents, providing diverse perspectives on the relationship between school environmental factors and achievement.

Overall, the demographic profile shows a representative mix of gender, age, school tenure, and academic performance among the P.7 pupils, which strengthens the reliability and validity of the study findings.

Table 4: Demographic Characteristics of Teachers and Head Teachers (n = 33)

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	20	61
	Female	13	39
Age (years)	21–30	5	15
	31–40	12	36
	41+	16	49
Teaching / Administrative Experience	Less than 1 year	3	9
	1–5 years	8	24
	6–10 years	11	33
	More than 10 years	11	33
Highest Academic Qualification	Grade III Certificate	5	15
	Diploma in Education	12	36
	Bachelor's Degree	12	36
	Master's Degree	4	12

Source: Primary data (2025).

In terms of gender, the majority of respondents were male, with 20 individuals (61%), while 13 respondents (39%) were female. This indicates a slightly higher representation of males in the teaching and administrative staff within the selected schools.

Regarding age, nearly half of the respondents, 16 (49%), were aged 41 years and above, followed by 12 respondents (36%) aged between 31 and 40 years, and 5 respondents (15%) aged 21–30 years. This distribution suggests that most participants were relatively mature, with considerable experience in the education sector.

Concerning teaching or administrative experience, 11 respondents (33%) had served for 6–10 years, another 11 respondents (33%) had more than 10 years of experience, 8 respondents (24%) had 1–5 years, and 3 respondents (9%) had less than 1 year of experience. These findings indicate

that the majority of respondents had substantial experience, which is critical for providing informed perspectives on school environmental factors and their impact on academic performance.

In terms of academic qualifications, 12 respondents (36%) held a Diploma in Education, another 12 respondents (36%) had a Bachelor's Degree, 5 respondents (15%) had a Grade III Teacher Certificate, and 4 respondents (12%) had a Master's Degree. This shows a fairly educated workforce, capable of providing knowledgeable insights regarding school management and pupil performance.

Overall, the demographic data indicate that the sample of teachers and head teachers was experienced, mature, and reasonably qualified, providing a reliable basis for examining the influence of school environmental factors on pupil academic outcomes.

Table 5: Social School Environment in Public Primary Schools in Kakiri Sub County

Statement	SA	A	N	D	SD	Mean	Std Dev
Teachers are friendly and supportive toward pupils	80	90	30	20	10	3.92	0.98
Pupils treat each other with respect at school	70	85	40	25	10	3.78	1.05
Teachers regularly communicate with parents/guardians	50	70	40	40	30	3.30	1.20
There is effective leadership and management in this school	60	80	50	25	15	3.65	1.10
School rules and discipline are fairly enforced	55	75	50	30	20	3.52	1.15
Teachers encourage pupil participation in class	75	85	35	20	15	3.85	1.00
Peer relationships at school promote learning and cooperation	60	80	45	25	20	3.60	1.10
Pupils feel safe from bullying at school	50	70	50	35	25	3.28	1.25
The school promotes gender equality among pupils and staff	55	75	45	35	20	3.43	1.15
Guidance and counseling services are available in this school	40	60	50	50	30	3.05	1.30

Source: Primary Data (2025).

Social School Environment in Public Primary Schools in Kakiri Sub County.

Descriptive Findings on Social School Environment in Public Primary Schools in Kakiri Sub County

Teachers were reported to be friendly and supportive toward pupils, with a mean score of 3.92, suggesting that most respondents agreed to this statement. Similarly, pupil-to-pupil interactions were generally respectful, with a mean of 3.78, indicating a positive peer relationship, though some respondents remained neutral or disagreed.

Communication between teachers and parents/guardians was relatively limited, as reflected by a lower mean score of 3.30, showing that a significant proportion of respondents perceived irregular communication. Leadership and management were perceived as moderately effective, with a mean of 3.65, while the enforcement of school rules and discipline had a mean of 3.52, suggesting that disciplinary practices were somewhat consistent but not uniformly applied.

Teachers' encouragement of pupil participation in class was moderately high (mean = 3.85), reflecting efforts to involve pupils in learning activities. Peer relationships were considered moderately conducive to learning and cooperation, with a mean of 3.60. However, pupils' sense of safety from bullying scored lower (mean = 3.28), indicating that some pupils did not always feel protected in the school environment.

Promotion of gender equality among pupils and staff was moderate (mean = 3.43), while the availability of guidance and counseling services was relatively limited, as reflected by the lowest mean of 3.05. This suggests that support services for pupils' social and emotional needs were inadequate in some schools.

Overall, the descriptive statistics indicate that while teachers and pupils reported some positive aspects of the social school environment, challenges such as inconsistent parental communication, limited counseling services, and occasional bullying need to be addressed to foster a more supportive and inclusive school environment.

Qualitative Findings on Social School Environment in Public Primary Schools in Kakiri Sub County, Wakiso District

The interviews with head teachers provided detailed insights into the social environment in the sampled schools.

Teacher-Pupil Relationships: All head teachers emphasized that teachers were generally supportive, though challenges existed. Head Teacher 1 stated, *“Our teachers try their best to guide pupils, but with large class sizes, it is difficult to give attention to every child.”* Head Teacher 2 added, *“Teachers are friendly and approachable, but sometimes enforcing rules strictly causes conflicts with pupils.”* Similarly, Head Teacher 3 noted, *“Most teachers provide guidance, but limited staff means some pupils do not get enough individualized support.”*

Peer Relationships: Regarding interactions among pupils, the head teachers reported mostly positive relationships. Head Teacher 1 remarked, *“Pupils mostly respect each other, although there are occasional bullying cases, especially among the older ones.”* Head Teacher 2 observed, *“Group activities encourage cooperation, but rivalry between classes sometimes leads to tension.”* Head Teacher 3 highlighted, *“Most pupils work well together, though some have difficulties socializing because they miss school frequently.”*

Communication with Parents: On parental involvement, head teachers noted that communication was inconsistent. Head Teacher 1 said, *“Parent attendance at meetings is often low, making it hard to follow up on pupils’ progress.”* Head Teacher 2 mentioned, *“We try to reach parents through phone calls and meetings, but not all respond*

promptly.” Head Teacher 3 added, *“Most communication is via notices, and we really need more active participation from parents.”*

Leadership and Discipline: The head teachers reflected on management and discipline in their schools. Head Teacher 1 stated, *“Our leadership is generally effective, but sometimes we only react to problems instead of preventing them.”* Head Teacher 2 noted, *“Some teachers and pupils feel that rules are applied unevenly, which can cause friction.”* Head Teacher 3 said, *“Maintaining discipline is a challenge because of the large number of pupils.”*

Safety and Counseling Services: Safety and counseling were highlighted as areas needing improvement. Head Teacher 1 said, *“Some pupils feel unsafe at times, and we provide counseling when needed, but it is not systematic.”* Head Teacher 2 mentioned, *“We lack staff trained in guidance and counseling, which limits support for pupils.”* Head Teacher 3 added, *“Overall, the school is relatively safe, but we do not have structured counseling programs for pupils.”*

Gender Equality: Regarding gender issues, head teachers shared efforts to promote equal participation. Head Teacher 1 remarked, *“Both boys and girls are encouraged to take part in all school activities, though cultural biases sometimes interfere.”* Head Teacher 2 stated, *“Leadership roles are often dominated by boys, despite our efforts to promote equality.”* Head Teacher 3 said, *“Participation is mostly fair, but societal norms influence which pupils engage in certain activities.”*

Overall, the interviews revealed that while the social environment was generally supportive, challenges such as large class sizes, limited parental involvement, insufficient counseling services, and occasional bullying affected the learning climate in these schools.

Table 6: Thematic Summary of Qualitative Findings on the social school environment

Theme	Key Findings	Supporting Quotes
Teacher-Pupil Relationships	Teachers are generally supportive, but large class sizes limit individual attention.	HT1: “Our teachers try their best to guide pupils, but with large class sizes, it is difficult to give attention to every child.”
Peer Relationships	Pupils mostly cooperate, though occasional bullying and class rivalry exist.	HT2: “Group activities encourage cooperation, but rivalry between classes sometimes leads to tension.”
Communication with Parents	Parental involvement is inconsistent; school uses notices, calls, and meetings, but response is low.	HT1: “Parent attendance at meetings is often low, making it hard to follow up on pupils’ progress.”
Leadership and Discipline	Leadership is generally effective; some issues with uneven rule enforcement and reactive management.	HT2: “Some teachers and pupils feel that rules are applied unevenly, which can cause friction.”
Safety and Counseling Services	School is relatively safe, but systematic guidance and counseling services are limited.	HT2: “We lack staff trained in guidance and counseling, which limits support for pupils.”
Gender Equality	Efforts are made to promote equal participation, but cultural and societal norms sometimes interfere.	HT1: “Both boys and girls are encouraged to take part in all school activities, though cultural biases sometimes interfere.”

Source: Primary Data (2025).

Table 7: Academic Performance of Pupils in Public primary schools in Kakiri Sub County

Statement	SA	A	N	D	SD	Mean	Std Dev
Most pupils in P.7 complete the school year without dropping out.	40	65	50	45	30	3.09	1.21
There is a steady progression of pupils from one class to the next.	45	70	45	40	30	3.18	1.18
Pupils' class attendance is consistent throughout the term.	35	60	40	55	40	2.97	1.25
P.7 pupils can read and understand English at their grade level.	30	55	45	60	40	2.86	1.27
Pupils can solve basic mathematical problems appropriate to their level.	25	60	45	55	45	2.84	1.26
Pupils perform well in tests.	30	50	45	60	45	2.80	1.28
Pupils perform well in standardized examinations.	25	45	40	65	55	2.65	1.30
Pupils exhibit high literacy skills.	30	55	40	60	45	2.82	1.27
Most pupils pass the PLE at this school.	20	45	35	70	60	2.52	1.32
Pupils are well-prepared for secondary education.	25	50	40	60	55	2.68	1.29
Overall Mean	—	—	—	—	—	2.84	—

Source: Primary Data (2025)

Academic Performance of Pupils in Public primary schools in Kakiri Sub County

Descriptive Findings on Academic Performance of Pupils in Public primary schools in Kakiri Sub County.

The findings show that slightly more than half of the respondents agreed that most pupils in Primary Seven complete the school year without dropping out (Mean = 3.09, SD = 1.21) and that there is steady progression of pupils from one class to the next (Mean = 3.18, SD = 1.18). However, pupil attendance was reported to be inconsistent, as indicated by a relatively low mean of 2.97 (SD = 1.25).

In terms of academic competencies, many respondents disagreed that pupils possess satisfactory proficiency in reading and understanding English (Mean = 2.86, SD = 1.27) or solving basic mathematical problems (Mean = 2.84, SD = 1.26). Similarly, pupils' performance in class tests and standardized examinations was perceived to be poor, with mean scores of 2.80 (SD = 1.28) and 2.65 (SD = 1.30), respectively.

The findings also indicate that pupils exhibited low literacy skills (Mean = 2.82, SD = 1.27) and that the majority of pupils did not perform well in the Primary Leaving Examinations (PLE), as shown by the lowest mean of 2.52 (SD = 1.32). Furthermore, respondents disagreed that pupils were adequately prepared for secondary education (Mean = 2.68, SD = 1.29).

Overall, these results suggest that academic performance in public primary schools within Kakiri Sub County is below average, with multiple factors likely contributing to the low outcomes, including irregular attendance, inadequate literacy and numeracy skills, and poor preparation for national examinations.

Qualitative Findings on Academic Performance of Pupils in Public primary schools in Kakiri Sub County.

Interviews with three head teachers provided deeper insights into the academic performance of pupils in public primary schools in Kakiri Sub County. Their views revealed multiple, interrelated factors contributing to the low performance observed from the quantitative findings.

Head Teacher 1 (School A):

This head teacher emphasized the impact of home background and irregular attendance on pupil performance. He explained,

"Most of our pupils come from poor families where education is not given much attention. Some children stay home to help with domestic work or in the gardens, especially during planting season. This affects their attendance and concentration in class."

He added that while teachers try their best, inadequate parental support and limited follow-up from home reduce pupils' motivation to perform well academically.

Head Teacher 2 (School B):

The second head teacher pointed out the shortage of instructional materials and teacher workload as key barriers to effective learning. She noted,

"Our teachers handle very large classes with limited teaching aids. For example, in some cases, one book is shared among four or five pupils. This makes it hard for pupils to practice and master concepts, especially in English and Mathematics."

She also mentioned that despite regular internal tests, the lack of remedial lessons and insufficient supervision from parents contribute to the continued low performance in PLE results.

Head Teacher 3 (School C):

This head teacher highlighted emotional and psychological challenges among pupils, linking them to poor academic engagement. He remarked,

"Many children face emotional distress due to poverty or neglect. Some come to school hungry, while others lack basic scholastic materials. It's difficult for such pupils to focus on learning or perform well in examinations."

He further observed that while the school strives to provide counseling and guidance, the absence of trained counselors and limited resources hinder sustained support for pupils' academic and emotional development.

Table 8: Thematic Summary of Qualitative Findings on Academic Performance of Pupils in Public primary schools in Kakiri Sub County

Theme	Description	Illustrative Quote
Irregular Attendance and Limited Parental Support	Many pupils miss school due to domestic responsibilities and a lack of parental supervision, which hinders consistent learning and performance.	"Some children stay home to help with domestic work or in the gardens, especially during planting season. This affects their attendance and concentration in class." — <i>Head Teacher 1</i>
Inadequate Learning Resources	Schools face shortages of books and learning materials, leading to difficulties in concept mastery, particularly in core subjects.	"One book is shared among four or five pupils. This makes it hard for pupils to practice and master concepts, especially in English and Mathematics." — <i>Head Teacher 2</i>
Teacher Workload and Limited Remedial Support	Large class sizes and insufficient time for individualized attention limit teachers' ability to address learning gaps.	"Our teachers handle very large classes with limited teaching aids... there's no time for remedial teaching." — <i>Head Teacher 2</i>
Emotional and Psychological Challenges	Pupils face mental and emotional distress stemming from poverty, neglect, or hunger, which undermines their academic engagement.	"Many children face emotional distress due to poverty or neglect... Some come to school hungry, while others lack basic scholastic materials." — <i>Head Teacher 3</i>
Absence of Structured Guidance and Counseling	Schools lack trained counselors to provide academic and emotional support, leading to unresolved pupil challenges.	"We try to provide counseling, but we don't have trained staff or materials to support pupils effectively." — <i>Head Teacher 3</i>

Source: Primary Data (2025)

Documentary Findings on Academic Performance of Pupils in Public primary schools in Kakiri Sub County

The documentary review focused on existing school records such as Primary Leaving Examination (PLE) results, class performance registers, attendance books, and school inspection reports obtained from the ten sampled rural public primary schools in Kakiri Sub County. These records provided a complementary perspective to the questionnaire and interview data by offering objective indicators of academic outcomes over the past three years (2022–2024).

Primary Leaving Examination (PLE) Results

The reviewed PLE records revealed a generally low but fluctuating trend in pupil performance. Across the ten schools, the average proportion of pupils passing in Division I and II remained below 20%, while the majority (about 65%) consistently fell within Divisions III and IV. Approximately 15% of candidates failed to obtain a pass grade each year.

For instance, one school recorded 3 pupils in Division I, 8 in Division II, 20 in Division III, 25 in Division IV, and 9 failures out of 65 candidates in 2024. These figures reflected persistent challenges in literacy and numeracy competencies, especially in English and Mathematics.

Class Attendance and Progression Records

Attendance registers and class progression summaries indicated irregular pupil attendance and high rates of absenteeism, particularly during farming seasons and periods of illness. Average termly attendance ranged between 70–80%, and in some schools, less than two-thirds of enrolled pupils completed the academic year. The records also showed that pupil repetition rates averaged 12%, especially in lower primary classes, while dropout rates ranged between 8% and 10% annually.

These patterns suggested that irregular attendance and grade repetition significantly contributed to poor academic outcomes in the sub-county.

School Inspection and Supervision Reports

Inspection reports from the Wakiso District Education Office (2023 and 2024) highlighted key issues affecting pupil performance, including inadequate teacher supervision, limited instructional materials, and poor infrastructure in most rural schools. Inspectors frequently noted overcrowded classrooms, insufficient textbooks, and limited use of learner-centered teaching methods. Some schools were commended for teachers' dedication and community involvement, but overall, inspectors rated the academic standards as "below average."

Internal Assessment Records

Review of school-level assessment records (class tests, midterm exams, and promotional results) revealed low average scores across most subjects. In English and Mathematics, mean scores often ranged between 45–55%, while in Social Studies and Science, averages were slightly higher, around 55–60%. Continuous assessment results also showed a wide performance gap between high-achieving

pupils and those performing below the required proficiency level.

Overall, documentary evidence pointed to persistently low academic performance in public primary schools within Kakiri Sub County. Contributing factors identified across records included irregular pupil attendance, inadequate learning resources, teacher absenteeism, and weak supervision mechanisms. The findings aligned with observed field data, suggesting that improving academic performance requires strengthening both instructional quality and school management practices.

Table 9: Correlation between School Environment and the Academic Performance of Pupils in Rural Public Primary Schools in Kakiri Sub County

Variables	1	2	3	4
2. Social school environment	0.62**	1		
4. Academic performance of pupils	0.54**	0.60**	0.68**	1

Notes:

- N = 230
- All correlations are significant at the 0.01 level (2-tailed).
- Source: Primary Data (2025)

Correlation Findings of the Study.

The social school environment, which encompasses teacher-student relationships, peer interactions, and the general social climate, demonstrated a slightly stronger positive correlation with academic performance ($r = 0.60$, $p < 0.01$). This indicates that supportive social interactions within the school positively influence pupils' learning outcomes.

Regression Analysis of School Environment on Academic Performance

A multiple regression analysis was conducted to examine the extent to which social school environments predict the academic performance of pupils in rural public primary schools in Kakiri Sub County. Academic performance was treated as the dependent variable, while the three dimensions of school environment were independent variables.

Table 10: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.74	0.55	0.54	2.15

The model indicates that 55% of the variance in pupils' academic performance is explained collectively by the physical, social, and psychological school environments (R^2

$= 0.55$, Adjusted $R^2 = 0.54$, $p < 0.01$). This suggests a strong overall predictive power of the school environment on academic outcomes.

Table 11: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1150.42	3	383.47	82.91	0.000**
Residual	940.38	226	4.16		
Total	2090.80	229			

The ANOVA results show that the regression model is statistically significant ($F(3, 226) = 82.91$, $p < 0.01$),

confirming that the school environment dimensions collectively predict academic performance.

Table 12: Coefficients

Predictor	B	Std. Error	Beta (β)	t	Sig.
Social school environment	0.41	0.06	0.34	6.83	0.000**
Constant	2.10	0.42		5.00	0.000**

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A multiple regression analysis was conducted to examine the predictive effect of the social dimensions of the school environment on the academic performance of pupils in rural public primary schools in Kakiri Sub County. The analysis revealed that the social school environment collectively explained 55% of the variance in academic performance ($R^2 = 0.55$, Adjusted $R^2 = 0.54$, $F(3, 226) = 82.91$, $p < 0.01$), indicating a strong and statistically significant overall model. Followed by the social school environment ($\beta = 0.34$, $p < 0.01$). Social interactions and supportive teacher-student relationships also play a substantial role.

Discussion of results

Social School Environment and Academic Performance

The social school environment demonstrated a slightly stronger positive correlation with academic performance ($r = 0.60$, $p < 0.01$), indicating that interpersonal and relational factors within schools significantly influence learning outcomes. Key elements include teacher-pupil relationships, peer interactions, school leadership, classroom discipline, and parental involvement.

Consistent with prior studies (Nabwire & Kiggundu, 2022; Turyahikayo, 2021), positive teacher-pupil relationships were associated with increased motivation, confidence, and classroom participation. Conversely, negative social interactions, including teacher absenteeism or harsh discipline, were linked to low self-esteem, disengagement, and poor academic performance. Peer relationships also emerged as important; inclusive and collaborative school cultures foster active participation and engagement, whereas bullying, exclusion, or social stigma undermine learning. In rural schools, social support structures are often limited due to high pupil-teacher ratios and low parental involvement (Muwanga & Kasule, 2021; MoES, 2023). Despite these challenges, schools with supportive leadership, positive peer cultures, and active community engagement demonstrated improved pupil outcomes, suggesting that social environment can buffer some infrastructural inadequacies.

Conclusion

The social school environment showed a slightly stronger positive correlation with academic performance. This implies that positive teacher-pupil relationships, peer support, effective leadership, and parental involvement

contribute to better learning outcomes. It can be concluded that a supportive social environment is a critical determinant of pupil academic success in rural schools, as it fosters motivation, engagement, and emotional support even in contexts with limited physical resources.

Limitations of the study

Limited Generalizability: The study focused on rural public primary schools in Kakiri Sub County, Wakiso District, which may limit the generalizability of the findings to other regions or urban settings.

The researcher used stratified random sampling to ensure a representative sample of teachers and P.7 pupils within the target area, and purposive sampling for head teachers to capture diverse perspectives, thereby enhancing internal validity.

Response Bias: Participants, especially teachers and pupils, might have provided socially desirable answers rather than fully honest responses.

Time Constraints: Collecting data across multiple schools within a short period could have affected the depth of responses or completeness of data collection.

Recommendations

Schools should encourage inclusive peer interactions and establish programs that promote collaboration, mutual respect, and conflict resolution among learners.

School leaders should maintain effective management structures that support teacher professionalism, organization, and communication within the school.

Parents and community members should be actively involved in school activities, including monitoring homework, attending meetings, and supporting school initiatives, to strengthen pupils' social support networks.

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List of abbreviations

CBC – Competency-Based Curriculum
C/U – Church of Uganda
DEO – District Education Officer
FGD – Focus Group Discussion
MoES – Ministry of Education and Sports
NGO – Non-Governmental Organization
PLE – Primary Leaving Examination
P.7 – Primary Seven
SPSS – Statistical Package for the Social Sciences
UPE – Universal Primary Education
UNESCO – United Nations Educational, Scientific and Cultural Organization
UNICEF – United Nations International Children's Emergency Fund

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There is no conflict of interest.

Availability of data

Data used in this study is available upon request from the corresponding author

Authors contribution

LN designed the study, conducted data collection, cleaned and analyzed data and draft the manuscript and DN

supervised all stages of the study from conceptualization of the topic to manuscript writing and submission.

Authors biography

Lydia Namirembe is a student of Masters of Education Planning and Management at School of Post Graduate Studies and Research, Team University.

Dr. Doreen Ankunda is a research supervisor at School of Post Graduate Studies and Research, Team University.

Edmand Bakashaba is a research supervisor at School of Post Graduate Studies and Research, Team University.

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