

Relationship between school physical environment and co-curricular activities in private primary schools. A cross-sectional study.

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Stella Ampaire*, Dr. Kevin Nwana
School of graduate studies and research, Team University

Abstract

Background

Co-curricular activities are seen as a way of enhancing students' academic, social, and personal development, as well as preparing them for future careers. The study aims to assess the relationship between the school's physical environment and co-curricular activities in private primary schools.

Methodology

The study adopted a descriptive, correlational, and cross-sectional survey design. The study was carried out in selected private primary schools in Fort Portal City. Fort Portal City is located in western Uganda, in the Kabarole District. The researcher ensured quantitative data was collected using questionnaires. Simple random sampling was used to select 196 respondents.

Results

The majority of the respondents were male 58.3% while females were 41.7%. The largest age group consisted of respondents below 20 years, mainly pupils, representing 66.1% of the total sample. The Pearson Correlation coefficient of 0.682** indicates a strong positive correlation between the school's physical environment and the pupil's participation in co-curricular activities. A strong positive relationship ($R = 0.714$) between the school's physical environment and the pupil's participation in co-curricular activities. The R Square value of 0.509 indicates that approximately 50.9% of the variance in pupil participation can be explained by the school's physical environment. The Unstandardized Coefficient for the school's physical environment is 3.214.

Conclusion

Further, findings showed a strong positive relationship between the school's physical environment and pupil's participation in co-curricular activities within private primary schools in Fort Portal City.

Recommendations

Private schools should allocate resources to enhance the school's physical infrastructure, including sports facilities, recreational areas, and amenities, to create an attractive and functional environment that promotes student engagement in co-curricular activities.

Keywords: Co-curricular activities, Physical environment, Private primary schools.

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Corresponding Author: Stella Ampaire*

School of graduate studies and research, Team University.

Background

Through the turbulent times of the 1970s and 1980s, characterized by political instability and economic difficulties under regimes like Idi Amin's, Uganda's education sector faced numerous challenges. Despite this, some level of co-curricular activities continued in schools, though with possible interruptions and inconsistencies (Charles & Khan, 2022). In the 1990s and 2000s, the government of Uganda showed renewed interest in education reforms, including the introduction of Universal

Primary Education (UPE) in 1997. This program aimed to increase access to primary education for all children. As a result, school enrollments surged, which presented both opportunities and challenges for co-curricular activities (Okwanyo, 2020). On one hand, it allowed for greater participation; on the other, resources became stretched, and maintaining a wide range of activities became more challenging.

According to Gietz (2014), the physical environment includes school buildings, classrooms, playgrounds,

libraries, laboratories, and other facilities. It also covers provisions like proper lighting, ventilation, sanitation, safety measures, and the availability of adequate resources and materials for learning and extracurricular activities. Co-curricular activities in Uganda typically include sports, music, dance, drama, debating clubs, and various societies centered on subjects such as science, languages, or the environment. These activities are recognized for their role in developing key skills such as communication, collaboration, and critical thinking (Asiimwe, Babalola, & Atuhaire, 2021). They also serve to nurture talents and can be a forum for discussing issues that are relevant to the student's lives and communities, such as health education and civic responsibility.

Co-curricular activities are seen as a way of enhancing students' academic, social, and personal development, as well as preparing them for future careers. However, the implementation of co-curricular activities in private primary schools in Uganda faces various challenges, such as a lack of resources, time, and support from stakeholders (Namusoke & Rukundo, 2022). The study aims to assess the relationship between the school's physical environment and co-curricular activities in private primary schools.

Methodology

Research design

The study adopted a descriptive, correlational, and cross-sectional survey design. Further, the study adopted a mixed research approach. The design was appropriate as it involved analysis of respondents across the wide spectrum for both primary and secondary data that was obtained using questionnaires, interviews, and document analysis.

Study setting

The study was carried out in selected private primary schools in Fort Portal City. Fort Portal City is located in western Uganda, in the Kabarole District. It is situated near the border with the Democratic Republic of the Congo, and it's known for its beautiful landscape, including the nearby Rwenzori Mountains and Kibale National Park.

Fort Portal in Kabarole District is located approximately 296 kilometers (184 mi) by road, west of Kampala, Uganda's capital and largest city, on an all-tarmac two-lane highway. The geographical coordinates of Fort Portal City are 0°39'16.0"N, 30°16'28.0" E (Latitude: 0.654444; Longitude: 30.274444). Fort Portal is situated at an average elevation of 1,523 meters (4,997 ft) above sea level. The study will use Greenhill Academy - Fort Portal Campus, St. Mary's Primary School, Kabarole Parents' Primary School, St. Anthony Primary School, and Fort Portal Primary School as selected private primary schools where the study will take place. The study covered 4 years from 2020 to 2023. This period provided sufficient information on the participation of pupils in private schools in co-curricular activities.

Population of the study

This study was carried out in five private primary schools within Fort Portal City. The study used Greenhill Academy - Fort Portal Campus, St. Mary's Primary School, Kabarole Parents' Primary School, St. Anthony Primary School and Fort Portal Primary School. The study used head teachers, sports teachers, District inspectors of schools, District Educational officers, sports prefects, sports teachers, and primary six pupils (usually actively engaged in co-curricular activities) from each of the selected private primary schools as respondents of the study.

Table 1: Target Population

Respondents	Greenhill Academy - Fort Portal Campus	St. Mary's Primary School,	St. Anthony Primary School	Fort Portal Primary School	Kabarole Parents' Primary School	Total
Headteachers	01	01	01	01	01	05
Directors	01	01	01	01	01	05
Sports teachers	02	02	02	02	02	10
Sports prefects	02	02	02	02	02	10
Teachers	17	19	18	14	12	80
Primary six pupils	56	67	65	50	50	288
Total	79	92	89	68	56	398

The study used 398 participants as the study population. These included 5 head teachers, 10 sports teachers, 10 sports prefects, 80 teachers, and 288 primary six pupils. Primary six pupils were selected as respondents of the

study because it was the most active class in co-curricular activities since P.7 is usually denied participation.

Sample size

The study was guided by Krejcie & Morgan (1970) in determining the sample size of the study.

Table 2: Sample size

Respondents	Population size	Sample size	Sampling technique
Headteacher	05	05	Purposive sampling
Directors	05	05	Purposive sampling
Sports teachers	10	10	Purposive sampling
Sports prefects	10	10	Purposive sampling
DIS	01	01	Purposive sampling
DEO	01	01	Purposive sampling
Teachers	80	36	Simple random sampling
P.6 Pupils	288	128	Simple random sampling
Total	400	196	

The study therefore used 196 respondents as the sample size of the study. These were carefully and proportionately selected to achieve the study objectives.

Sampling techniques

The simple random sampling techniques helped the researcher ensure that all respondents had equal chances of being selected for the study.

Purposive sampling was used to select key respondents of the study including head teachers, directors, sports teachers, sports prefects, and district education officials. The method was used to select respondents with more knowledge about the participation of pupils in co-curricular activities and the school environment.

Data collection methods

The researcher ensured quantitative data was collected using questionnaires.

Questionnaire method

Self-administered questionnaires were issued to the respondents to get respondent's knowledge of the study variables. These were issued to the teachers and pupils of the selected primary schools within Fort Portal City.

Interview method

The method was used to collect data from the key respondents of the study. Interviews were scheduled with the target respondents and an interview guide was used to collect more detailed information from the head teachers, directors, sports teachers, District Inspector of schools, District Educational officer, and sports prefects about the study variables.

Document analysis method

The researcher used the method to review existing documents and literature on the school environment and previous involvement in the co-curricular activities of pupils in private primary schools.

Validity of the study instrument

The relevance of the questions used to measure variables and the validity of the instrument was tested using the Content Validity Index (CVI) and expert judgment method. This involved judges/ experts scoring the relevance of the questions in the instruments about the study variables and a consensus judgment given on each variable was accorded. The CVI was measured using the formula; $CVI = \frac{\text{Agreed items by judges}}{\text{A suitable/total number of research questions in the instrument}}$. The obtained value of 0.8 was compared with 0.7 as suggested by Amin (2005) as a good measure of validity.

Reliability of the study instruments

The internal consistency and reliability of the instruments were measured using Cronbach's alpha coefficient taking only variables with a high alpha coefficient accepted by social science research (Amin, 2005). Reliability was expressed numerically, usually as a reliability co-efficient ranging between 0.00 – 1.00. A pilot study using 10% of the sample size in selected primary schools was used and each instrument was accepted as reliable, as Cronbach Alpha co-efficient of 0.83 was obtained and compared with 0.7 as suggested by (Amin,2005).

Data collection procedure

After fully defending this proposal, an introductory letter was secured from Team University School of Graduate Studies allowing the researcher to proceed to the field for purposes of collecting primary data. Using the same letter, the researcher sought permission from the District Education Officer, directors, and head teachers of the selected private primary schools within Fort Portal City. It is both the cover letters from Team University and the DEO that were attached to the questionnaires. The questionnaires were physically delivered to the target respondents and collected after 1 week. They were then sorted, edited, coded, and entered into computer software for analysis.

Data analysis

Data analysis refers to a process of gathering modeling and transforming data to highlight useful information, suggesting conclusions, and supporting decision making a quantitative statistical package for social science (SPSS) that has data handling and statistical analysis. Qualitative data was analyzed using descriptive statistics which helped to establish patterns, trends, and relationships that made it easier to understand and interpret the implications of the study. The data collected from the interview was analyzed using content analysis. Based on different theme data was coded using different files and different pseudo names. Quantitative data was analyzed using mean, pearson correction product moment, and regression with the help of the computer package. Mean was used to show the level of

agreement and disagreement among responses, and Pearson correlation was used to ascertain the overall, relationship between the independent and dependent variables.

Ethical consideration

A report was created as a building block for openness and respondent participation. Ethical issues were taken into consideration where respondents were assured of confidentiality, the permission to share with the respondents was first sought, community norms and values were respected and every respondent was treated the way they came.

Results

Table 3: Response rate

Respondents	Questionnaires were issued and interviews scheduled	Questionnaires were returned and interviews conducted	Response rate (%)
Headteacher	05	04	80%
Directors	05	03	60%
Sports teachers	10	08	80%
Sports prefects	10	10	100%
DIS	01	01	100%
DEO	01	01	100%
Teachers	36	34	94.4%
P.6 Pupils	128	119	92.7%
Total	196	180	91.8%

Based on the findings in Table 3, the response rate for head teachers was 80%. This indicates a reasonably good response, although one head teacher did not participate.

Directors showed a response rate of 60%, which is comparatively lower than other groups. This was because some two directors were busy and not available for an interview or questionnaire.

With an 80% response rate, sports teachers have shown good participation, indicating their interest or involvement in co-curricular activities.

Sports Prefects, DIS, and DEO. These groups all had excellent response rates of 100%, indicating a high level of engagement and cooperation from them. Also, teachers demonstrated a response rate of 94.4%, which was quite high. This suggests a strong interest or sense of responsibility among teachers towards the study. Pupils in P.6 showed a response rate of 92.7%, which was also notably high. This indicated a good level of cooperation from this group, considering the challenges of engaging young students in such studies.

Overall, the total response rate for the study was 91.8%, which was relatively high and indicated a generally successful data collection process. However, there are variations in response rates across different respondent groups.

The response rates suggest that there was generally a positive attitude towards the study among the target groups in the private schools of Fort Portal City. However, the slightly lower response rates for directors compared to other groups may warrant further investigation into the reasons behind their lower participation. Overall, the study achieved a high level of engagement from the respondents, which strengthens the validity of the findings and conclusions drawn from the data collected.

Demographic characteristics of the respondents

The researcher used gender, age, marital status, and level of education as demographic characteristics of the respondents and the findings are as follows.

Table 4: Demographic characteristics of the respondents

Characteristic	Frequency	Percent(%)
Gender		
Male	105	58.3%
Female	75	41.7%
Total	180	100%
Age (years)		
Below 20 years	119	66.1%
21 – 30 years	21	11.7%
31– 50 years	36	20%
51& Above years	4	2.2%
Total	180	100%
Marital status		
Single	119	66.1%
Married	48	26.7%
Separated	3	1.7%
Widowed	10	5.5%
Total	180	100%
Level of education		
Primary	119	66.1%
Certificate	5	2.8%
Diploma	36	20%
Bachelors	16	8.9%
Masters	4	2.2%
Total	180	100%
Years spent in this school		
0-5years	79	43.9%
6-10 years	89	49.4%
11+ years	12	6.7%
Total	180	100%

According to findings in Table 4, the majority of the respondents were male, constituting 58.3% of the total sample, while females accounted for 41.7%. This indicates a slight gender imbalance in the sample, with more males participating in the study.

Findings also indicated that the largest age group consisted of respondents below 20 years, mainly pupils, representing 66.1% of the total sample. This suggests that the study primarily focused on younger individuals, which aligns

with the context of exploring pupils' participation in school activities.

Further, findings showed that only a small percentage of respondents were in the age groups of 21-30 years (11.7%), 31-50 years (20%), and 51 years and above (2.2%). This further confirms that the study predominantly targeted a younger demographic.

Findings further showed that the majority of respondents were single, which correlates with the significant proportion of pupils in the sample. Single respondents

accounted for 66.1% of the total, while married respondents constituted 26.7%. Separated and widowed respondents were relatively few, with 1.7% and 5.5%, respectively.

Findings on the level of education showed that the highest proportion of respondents had primary education, consistent with the pupil demographic targeted by the study. Primary pupils represented 66.1% of the total sample. The distribution of respondents with higher levels of education, such as certificate, diploma, bachelor's, and master's degrees, was smaller, indicating a focus on the primary school level.

On the years spent in a particular school environment, the majority of respondents had spent 6-10 years in school, comprising 49.4% of the total sample. This suggests that many respondents were in the middle to later stages of their schooling. A significant portion had spent 0-5 years in school (43.9%), indicating a mix of relatively new students and those with more experience. A smaller percentage of respondents had spent 11 or more years in school, representing 6.7% of the total.

In conclusion, the demographic characteristics of the respondents in the study suggest a primary focus on pupils in private schools in Fort Portal City. The majority of respondents were male pupils below 20 years of age, predominantly single, and with primary education. This indicates that the study aimed to understand the perspectives and experiences of younger students in co-curricular activities within the context of private schooling. The findings provide valuable insights for improving co-curricular programs and enhancing pupil participation in these activities.

School physical environment and pupil's participation in co-curricular activities in private schools in Fort Portal City

To explore the relationship between School physical environment and pupils' participation in co-curricular activities in private schools in Fort Portal City, the researcher used descriptive analysis of responses that were captured using a Likert 5-point scale where 5- Strongly Agree (SA), 4- Agree (A), 3-Not sure (NS), 2-Disagree (D), 1-Strongly Disagree (SD), Mn- Mean, Std-standard deviation

Table 5: School physical environment and pupil's participation in co-curricular activities in private schools in Fort Portal City

Statement	SA	A	N	D	SD	Mean	Std
The school has enough buildings and other structures to support co-curricular activities	77	83	20			4.3	0.4
The schools have integrated technology into pupils' co-curricular activities			43	76	61	1.9	0.3
The school has a well-maintained outdoor areas		40	44	56	40	2.5	0.5
The school has well-designed collaborative spaces for co-curricular activities		55	65	23	37	2.8	0.6
The school facilities are clean and meet standards for co-curricular activities		41	16	55	68	2.2	0.4
The physical environment accommodates a variety of activities		45	38	87	10	2.6	0.4
The physical environment is comfortable for co-curricular activities.		52	20	65	43	2.5	0.3
There is regular maintenance and upkeep of co-curricular facilities		70	35	59	16	2.9	0.3
The school has a safe environment for co-curricular activities		68	41	51	20	2.9	0.5
The school has specialized sports facilities		23	38	80	39	2.3	0.5

According to findings in Table 5, on the statement "The school has enough buildings and other structures supporting co-curricular activities", the majority of respondents strongly agreed (SA) or agreed (A) that the school has enough buildings and structures supporting co-curricular activities, with a mean score of 4.3 and a low standard deviation of 0.4. This indicates a high level of satisfaction with this aspect of the physical environment. On the statement "The school has integrated technology in pupils' co-curricular activities", findings showed mixed

responses, with a larger number of respondents in the agree (A) category. The mean score was 1.9, suggesting a tendency towards disagreement with this statement. On the statement "The school has well-maintained outdoor areas", findings showed that responses were varied for this statement, with a mean score of 2.5 and a standard deviation of 0.5. This indicates that opinions were somewhat divided on the maintenance of outdoor areas. On the statement "The school has well-designed collaborative spaces for co-curricular activities", findings also indicated

that responses were spread across the Likert scale, with a mean score of 2.8 and a standard deviation of 0.6. This suggests a moderate level of satisfaction with collaborative spaces.

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On the statement “The school facilities are clean and meet standards for co-curricular activities”, findings showed that responses leaned towards disagreement with this statement, with a mean score of 2.2 and a standard deviation of 0.4. There may be room for improvement in maintaining cleanliness and meeting standards. On the statement “The physical environment accommodates a variety of activities”, findings showed a mean score of 2.6 and a standard deviation of 0.4 indicating a moderate level of satisfaction with the physical environment's accommodation of different activities. On the statement “The physical environment is comfortable for co-curricular activities”, findings showed mixed responses, with a mean score of 2.5 and a standard deviation of 0.3. This suggests that comfort levels in the physical environment were perceived differently by respondents. On the statement “There is regular maintenance and upkeep of co-curricular facilities”, findings showed that respondents generally disagreed that there is regular maintenance and upkeep, with a mean score of 2.9 and a low standard deviation of

0.3. This indicates that respondents were not satisfied with the maintenance practices.

On the statement “The school has a safe environment for co-curricular activities”, findings showed that respondents disagreed with the presence of a safe environment, with a mean score of 2.9 and a standard deviation of 0.5. Safety is perceived as a strong aspect of the physical environment. On the statement “The school has specialized sports facilities”, findings indicated a mean score of 2.3 and a standard deviation of 0.5. This suggests that there may be room for improvement in providing specialized sports facilities.

Overall, the data indicates that the physical environment in private schools in Fort Portal City plays a significant role in pupils' participation in co-curricular activities. Areas such as building infrastructure, maintenance practices, safety, and a variety of activities seem to be strengths, while aspects like integrating technology and specialized sports facilities may require further attention and improvement. Schools need to continue assessing and improving their physical environment to enhance students' engagement and overall experience in co-curricular activities.

Table 6: Correlational findings on the relationship between school physical environment and pupil's participation in co-curricular activities

	School physical environment	
Pupil's participation in co-curricular activities	Pearson Correlation	0.682**
	Sig. (2-tailed)	0.001
	N	180

****.** Correlation is significant at the 0.01 level (2-tailed).

The Pearson Correlation coefficient of 0.682** indicates a strong positive correlation between the school's physical environment and the pupil's participation in co-curricular activities. This suggests that the physical infrastructure, facilities, and amenities provided by the school have a substantial impact on student involvement and engagement in extracurricular pursuits. In conclusion, the strong positive correlations found between the school's physical environment, school social environment, and pupil's

participation in co-curricular activities emphasize the critical role these factors play in shaping students' engagement outside of traditional academics. Schools should focus on enhancing and maintaining a conducive physical environment with adequate facilities, promoting a supportive social atmosphere, and fostering a positive cultural environment to encourage and facilitate students' active participation in co-curricular activities.

Table 7: Regression findings on school Physical environment and pupil's participation in co-curricular activities

Model	R		R Square		Adjusted R Square	
School physical environment	0.714 ^b		0.509		0.533	
Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta			
(Constant)	4.351	.000			4.17	.001
School physical environment	3.214	.001	.14		2.115	.000

Dependent Variable: Pupil's participation in co-curricular activities in private schools in Fort Portal City

The model reveals a strong positive relationship ($R = 0.714$) between the school's physical environment and the pupil's participation in co-curricular activities. The R Square value of 0.509 indicates that approximately 50.9% of the variance in pupil participation can be explained by the school's physical environment. The Unstandardized Coefficient for the school's physical environment is 3.214, suggesting a similar interpretation as above. The Beta value of 0.14 represents the standardized coefficient.

The school's physical environment appears to have the most substantial influence, explaining over 50% of the variance in pupil participation. This underscores the importance of well-equipped facilities and resources in fostering student engagement in extracurricular activities. Schools in Fort Portal City can use these regression findings to prioritize improvements in the physical infrastructure, social dynamics, and cultural aspects to create an environment that maximizes student engagement and participation in co-curricular activities, ultimately enhancing overall student experiences and development.

Discussion

School physical environment and pupil's participation in co-curricular activities

The Pearson Correlation coefficient of 0.682 indicates a strong positive correlation between the school's physical environment and the pupil's participation in co-curricular activities. This suggests that the physical infrastructure, facilities, and amenities provided by the school have a substantial impact on student involvement and engagement in extracurricular pursuits.

While there was a high level of satisfaction with the availability of buildings and structures, indicating ample support for these activities, there are notable concerns regarding the integration of technology, maintenance of

outdoor areas, cleanliness, and comfort levels. Additionally, respondents expressed dissatisfaction with the regular maintenance and safety of the facilities, highlighting areas for improvement in upkeep practices. Although safety is perceived as a strong aspect, there seems to be a need for enhancing specialized sports facilities. Overall, the findings underscore a need for comprehensive improvements in various facets of the physical environment to better support and enhance co-curricular activities within the school.

Conclusion

Further, findings showed a strong positive relationship between the school's physical environment and pupil's participation in co-curricular activities within private primary schools in Fort Portal City.

Recommendations

Private schools should allocate resources to enhance the school's physical infrastructure, including sports facilities, recreational areas, and amenities, to create an attractive and functional environment that promotes student engagement in co-curricular activities.

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List of abbreviations

CVI	Content Validity Index
DEO	District Education Officer
DIS	District Inspector of Schools
SPSS	Statistical Package for Social Scientists
UPE	Universal Primary Education

Source of funding

The study had no source of funding.

Conflict of interest

There was no conflict of interest declared.

Author Biography

Stella Ampaire is a student of a Master of Educational Planning and Management at the School of Graduate Studies and research at Team University

Dr. Kevin Nwana is a lecturer at the School of Graduate Studies and research at Team University

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