

Analysis of School Environmental Factors Affecting College Students' Academic Achievement: The Case of Holy Child Training College in the Western Region of Ghana

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Abstract

This study investigated into the school environmental factors affecting students' academic achievement at the Holy Child Training College at Takoradi in the Western Region of Ghana. The study adopted a quantitative approach using a cross sectional survey design. The targeted student and tutor population was 132 and 24 respectively. Epi info 7 StatCalc was used in determining the number of students to sample from the college. Simple random and purposive sampling techniques were used to select 132 trainee teachers, and 24 tutors respectively with Structured questionnaire to solicit responses. Data were analysed using SPSS version 23. Findings from the study revealed that classroom environment was not conducive for learning and the class was not spacious enough to support movement and learning. Most teachers also made known that their classrooms are not spacious enough. It is recommended by authors that Government, the Metropolitan Chief Executive at the Sekondi Takoradi Metropolitan Assembly (STMA) in collaboration with parents and other education stakeholders could be channeled into classroom expansion (infrastructures) in other to help solve this problem overtime.

Keywords: academic achievement, classrooms, environmental factors, student teachers, teaching and learning

1. Introduction

Education has been an important aspect of human life throughout the history of humanity. It is one of the most fundamental instruments that can be used for bringing change in an individual and society at large. Education is a cornerstone of economic and social development. It improves the productive capacity of societies and their political, economic and scientific institutions. It helps to reduce poverty by mitigating its effects on population, health and nutrition. It also increases the value and efficiency of the labour offered by the poor. Education is vital in producing human resource for the economic development of a country. It is any act or experience that has a formative effect on mind, character or physical ability of an individual (Reda & Mulugeta, 2018).

Curriculum experts guided by national educational philosophy and policy, together with societal demands, scrutinize and select relevant and appropriate subject, content and pedagogical approaches that yield the expected outcomes for national development (Odumah, Babah, Mensah, Yalley, & Sakyi-Darko, 2020). Education is a critical tool for the transformation of the individual and the nation at large. For the individual to be able to live a useful life in his society and contribute towards the social, economic and political development of the nation, the relevant skills, values, attitudes, knowledge and competencies must be impacted (Asiyai, 2012).

These values, and relevant skills are formally transferred from generation to generation through teacher education. There is increasing evidence to suggest that teacher and teaching quality is a prevailing predictor of students' achievement.

The role teacher education play is to prepare teacher students for professional competence in the field through a planned educational program which provides broad and sound foundation for effective practice of teaching. However, in a situation where this is weak as a result of poor academic performance, there are likely to be problems at subsequent levels outside the four walls of the institution, especially when the students do not possess adequate knowledge needed to enhance professional skills required in executing basic teaching (Daisy & Buloubomere, 2013).

Teaching in Ghana is a crucial subject that permeates almost every issue in the society especially the field of education. Teacher education has a goal to develop a cutting-edge cadre of teachers with higher education, who are motivated in leading and developing the future teachers, academicians, researchers and managers in Ghana, African and beyond.

Therefore, the essence of teacher education and factors affecting it are very important to the teacher educator .

Academic performance of teacher education students is affected by social, psychological, economic, environmental and personal factors. These factors strongly influence on the students' achievement, but these factors vary from person to person and country to country. Academic performance can also be influenced by factors such as the school environment related or outside school environment factors. Either of them has an effect on students' academic achievement . Mac-Farlane (2002), explained that poor academic performance is the inability of students to cope with their studies as well as how various tasks assigned to them by their instructors are accomplished. However, it was further explained that academic achievement includes the ability to study and not being able to remember facts and to be able to express such knowledge gained either verbally or in writing within their environment (Mac-Farlane, 2002). This research therefore primarily seeks to investigate the school environmental factors influencing students' academic performance at Holy Child College of education, Takoradi in the Western Region of Ghana.

Problem Statement

The role of a holistic teacher education is to fully prepare education students with the requisite skills needed for sound practice. In case there are short falls in the chain of acquiring the needed skills, the whole public fall victims to poorly trained teachers which could be a threat to the country's manpower and development.

In Ghana the academic performance of students and quality of education are of utmost importance in Ghana, especially in the colleges of education. Success in recent licensing examination has been one of the most widely used indicators of teacher program quality. Failure of the licensing examination not only limits the supply of teachers, but also causes emotional and financial hardships and another quality assurance issue for the nation.

Contributing factors that were linked to student related factors such as; inattentiveness in class, abuse of mobile phones, absenteeism, inadequate supervision at the hostels and the unpreparedness of students towards the examination.

Previously, there are lots of researches on factors influencing students' academic performance in secondary schools. Again, Mensah (2020) looked into the factors affecting the performance of pupils but there is little evidence on the side of school environmental factors performance in the colleges of education in the country. For this reason, there is a gap in information on the factors leading to poor performance of teacher education students across the country. This research seeks to investigate into the school environmental factors leading to poor academic performance at Holy Child College of education. The study was guided by the following question: What school environmental factors cause poor academic achievements of students in the Holy Child College of education?

This study sheds light into the causal relationships among school environment, teacher, education, administration and achievement of pupils. The outcome of the study would assist all stakeholders in the district, particularly at the tertiary education level, to fashion out appropriate strategies that would enhance the academic performance of students. At the micro level, the students at Holy Child College of education would benefit by performing better academically, and progressing successfully through the stages of education. This would therefore have more life opportunities and also improve their family lives and socio-economic conditions. At the community level, Holy Child College of education would benefit from improved quality of education and successful pupils and citizens. The community would also get more contributions from its members. And at the macro level, identifying the variables that influence the academic achievement of colleges of education is of great importance, because it would serve as an essential tool for GTEC and other policy makers in the design of educational policies. The study would also add to the body of knowledge in the study area. This research will suggest possible areas that researchers can focus on exploring for new findings. Future researchers can also refer to this research material when the need arises.

It will serve as a source for information for literature review for anyone who wishes to conduct a study in the area of “students’ academic achievement”. There are so many factors that may lead to the poor academic performance of students but for the purpose of this research, the researchers only explored school environmental factors that influence academic achievement in the Holy Child College of education, Takoradi.

2. Literature Review

Theoretical Framework: Maslow’s Motivation Theory

Maslow's motivation theory states that man's behavior is controlled by both internal and external factors and emphasizes that humans have the unique ability to make choices and exercise free will. Maslow described these needs as being hierarchal in nature, meaning that some needs are more basic or more powerful than others and as these needs are satisfied, other higher needs emerge. The Maslow’s hierarchy of needs are basic needs Physiological needs such as (food, water, warmth and rest), safety needs .

The most important educational goal is for students to learn. An essential factor involved in meeting these goals is motivation. If students are unmotivated in one way or another, it is likely that little learning will take place, or if by chance some learning should take place, it is probable that it will not be retained. This theory has great impact on educational structure. In order to maximize on the effectiveness of school-wide and individual classroom teaching programs, administrators and teachers must consider students’ needs and their hierarchical order (Daisy & Buloubomere, 2013).

Academic Achievement or performance is the extent to which a student, teacher, or institution has achieved their short- or long-term educational goals. Cumulative GPA and Completion of educational benchmarks such as secondary school, diplomas and bachelor’s degrees represent academic achievement. Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important. A study by Mensah (2020) also reiterated that majority of schools are of the view that competency of teachers (well-trained teachers) affects the attitude of students towards learning, and this can affect academic achievement one way or the other.

School-Environmental Related Factors

Several school environmental factors have generally been identified as influencing academic performance. These include availability of instructional materials, school location and quality of the physical facilities, class size and pupil-teacher ratios, teacher qualification and experience, and supervision. Instructional materials provide information, organize the scope and sequence of the information presented, and provide opportunities for pupils to use what they have learned (Lockheed & Verspoor, 1991). Students usually perform better when they have books or study aids to foster their learning. These study aids or material resources could be textbooks, teachers’ guides, wall pictures, maps, atlases and other learning aids. The availability and use of teaching and learning materials affect the effectiveness of teachers’ lessons.

In addition, the school location and quality of the physical building influence the performance and achievement levels of pupils. It is stated that the quality of the physical facilities is positively related to student performance (Harbison & Hanushek, 1992). This assertion corroborates the assertion that good sitting arrangement and good buildings produce high academic achievements and performance, while dilapidated buildings that lack mental stimulating facilities coupled with low or no sitting arrangements is destructive. According to Bakare and Asikhia (1994) where the school is located determines to a very large extent the patronage such a school will enjoy. Similarly, the entire unattractive physical structure of the school environment could de-motivate learners to achieve academically. This is what Isangedigh (1988) refers to as learner’s environment mismatch.

According to him, this promotes poor academic performance. Engin-Demir (2009) argue that attending a school with a better physical environment is associated with increased math scores. Again, Adepoju (2001) found that students in urban schools’ manifest more brilliant performance than their rural counterparts. Also, Ogunleye (2002) reported a significant difference in the achievement of students in urban peri-urban areas.

Class sizes have also been identified as determinants of academic performance. Studies have indicated that schools with smaller class sizes perform better academically than schools with larger class sizes. Fabunmi and Adeniji (2007), for instance, indicated that three class factors (class size, student classroom space and class utilization rate), when taken together, determined significantly student’s academic performance in Oyo state, Nigeria. Similarly, Salfi and Saeed (2007) found a significant correlation between school size and student’s achievement in Pakistan. They revealed that small schools performed better than medium and large schools.

In 2001, Tremblay, Ross and Berthelot found class size to be inversely related to achievement, especially for children in early grades. Adeyela (2000) found that large class size is uncondusive for serious academic work.

3. Methodology

This study was quantitative in nature that is researchers were trying to understand the underlying phenomenon using numerical values to put out in an objective way what is happening and also to find how a specific variable affects another, disregarding the effects of other variables. This study employed a cross-sectional survey design. The population involved in this study were licensed teacher education students and tutors of Holy Child College of education who oversee the day-to-day administration of the school and hence is at better position to give the researcher more insight into the issues. The licensed teacher students were 202 in total while the tutors were 24 in total.

The StatCalc-Sample Size and Power function in the Epi Info 7 software was used in estimating the sample size. A total sample size of 132 licensed trainee teachers was to be obtained for this study. the research then used simple random sampling technique to select the actual respondents. The researcher utilized a prepared table to randomly pick respondents from the total number of students from year one program and in third year diploma program. All the 24 tutors on campus were included in the study. Purposive sampling was used in the selection of tutors for this study because of the immerse knowledge and better understanding they have on the subject matter. Out of the 156 participants, 132 were student teachers, and 24 were tutors. Structured questionnaire was used to solicit information from students and teachers on school environmental factors affecting college students' academic achievement. A descriptive statistical analysis was performed to generate tables including frequencies and percentages to describe the patterns and frequencies of responses solicited. This was done with the aid of Stata version 14.

4. Data Analysis

Environmental Factors Affecting the Academic Achievement of Trainee Teachers

Table1: Trainee Teachers Response to School Environmental Factors Affecting Academic Achievement

School Environment	Yes		No		Total	Total
	Freq.	Per (%)	Freq.	Per (%)	Freq.	Per (%)
School's environment supports learning	61	46.2	71	53.8	132	100.0
Enough books at the library to support learning	96	72.7	35	26.5	132	100.0
Classroom environment conducive for learning	58	43.9	74	56.1	132	100.0
Classroom spacious enough	36	27.3	96	72.7	132	100.0
Get place to sit and study over the weekends	103	78.0	29	22.0	132	100.0
Students make excessive noise during study time	91	68.9	41	31.1	132	100.0

Source: Field Survey, 2021

Key: Freq. = Frequency, Per. (%) = Percentage

From table 1, Most 71 (53.8%) student teachers indicated that the school's environment did not help them in learning while 96 (72.7%) representing majority indicated there are enough books at the library to aid their studies. 74 (56.1%) of them making up majority indicated there's no conducive environment in the school that aid their studies and majority 96 (72.7%) indicated there is not enough space in class rooms for learning. Most 103 (78.0%) student teachers get a place to sit and learn during weekends while 91 (68.9%) representing majority indicated students make excessive noise during study time. This attitude of students of excessive noise making confirms a study by Mensah and Frimpong (2020), which states that if students are to be effective citizens then they must possess the knowledge, skills and values which will prepare them to take appropriate civic action as individual or as members of groups devoted to civic improvement. Gaining knowledge is an integral part of citizenship skills which allows for reflective decision making. This implies that students must use their time judiciously to gain the requisite knowledge and skills than to make noise with their precious time.

When it comes to how the school's environment is setup to support learning most 71 (53.8%) of the students were not in the affirmative that the school's environment supports learning. Bakare and Asikhia (1994) confirms that schools environment which consist of physical structures have a direct influence on academic performance of students. That is,

good buildings help to produce good academic performance among students whilst dilapidated buildings is the inverse. Books and study materials are vital in students academic performance, however, most (96 (72.7%) students indicated that they had enough of such materials at their library to aid them in their studies.

A study by Lockheed and Verspoor (1991) justifies that study materials including books, teachers guide, wall papers, maps, atlases and other things helps to foster student learning and therefore help to improve on their academic performance.

Teachers Response on School Environmental Factors Affecting Academic Achievement

Table 2: Teachers Response on School Environmental Factors Affecting Academic Achievement

School Environment	Yes		No		Total	
	Freq.	Per. (%)	Freq.	Per (%)	Freq.	Per (%)
School's environment supports teaching	24	100.0	0	0	24	100.0
Enough books at the library to support you in preparing lecture notes	24	100.0	0	0	24	100.0
Classroom environment conducive for teaching	24	100.0	0	0	24	100.0
Classroom spacious enough	20	83.3	4	16.7	24	100.0
Able to control class noise and student's behavior whiles teaching	24	100.0	0	0	24	100.0
Ask students questions anytime you teach a class	24	100.0	0	0	24	100.0
Source: Field survey, 2021						
Key: Freq. = Frequency, Per. (%) = Percentage						

From table 2, All teachers 24 (100.0%) indicated that the schools environment aid teaching, same percentage indicated there are enough books at the library to aid their teaching. 24 (100.0%) of them making up all teachers indicated there is conducive environment in the school that aid teaching and majority 20 (83.3%) indicated there is enough space in class rooms for teaching. All (24 (100.0%)) the tutors indicated that, they were able to control class noise and student's behavior whiles teaching. All (24 (100.0%)) the tutors indicated; they ask students questions anytime they teach a class. When it comes to how the school's environment is setup to support learning all (24 (100.0%) teachers were in the affirmative that the school's environment supports teaching and learning in the school.

5. Study Findings

The study sought to find out the role school environment played in teacher students' academic performance. Findings from tutors indicated that the school's environment supported teaching and the library had enough books to support them in preparing lecture notes for students. The findings reviewed that classroom environment was conducive for teaching and the classroom was spacious enough. The tutors indicated they were able to control class noise and student's behavior whiles teaching. According to the tutors, the students were allowed to ask questions anytime a teacher was teaching. School's environment supports learning. However, students indicated that the classroom environment was not conducive for learning and the class was not spacious enough to support movement and learning which was contrary to the tutors' opinion. Findings from the students indicated that there was an excessive noise made by their colleagues during their study time.

6. Conclusion

The study sought to find out the role school environment played in teacher students' academic performance. It is concluded that the environment did not support teaching. The findings reviewed that classroom environment was conducive for teaching and the classroom was spacious enough from the tutors' point of view.

The tutors indicated they were able to control class noise and student's behavior whiles teaching. According to the tutors, the students were allowed to ask questions anytime a teacher was teaching. School's environment supports learning. However, students indicated that the classroom environment was not conducive for learning and the class was not spacious enough to support movement and learning which was contrary to the tutors' opinion. Findings from the students indicated that there was an excessive noise made by their colleagues during their study time.

The differences in opinions expressed by teachers and students may be attributed to the limited spaces in the classroom this is so because when the class space is small teachers are able to control the students which is conducive enough for the teachers in terms of teaching and learning as compared to a large class size where teachers find it difficult to control student's behaviour and on the other hand, students find it difficult to move around in the classroom when the class space is small which will probably call for chairs and desks to be put together with small or no space between them which will affect the students ability to focus when teachers are teaching which in the long run will affect their academic performance as compared to a class space which is big enough to give them greater flexibility of layout. This analysis concluded that the students do not have conducive environment to support them in learning, and therefore this research concluded that School environmental factors affect college students' academic achievement.

7. Recommendations

Based on the findings and conclusions above, the researchers propose these recommendations for further action:

- I. The problem of non-spacious classroom could lead to overcrowding of students as such infrastructure looks like a more generic problem across board in most teacher colleges of education. To help tackle this, GETFUND could support classroom expansion in order to help solve this problem overtime.
- II. Government, the Sekondi Takoradi Metropolitan Assembly (STMA) in collaboration with parents and other education stakeholders should provide teaching-learning materials to schools such as infrastructures, textbooks, reference books, chalks, chairs, desks and other basic needs required by a student. The government should maintain standards in teaching and learning process.

References

- Adepoju, T. (2001). *Location Factors as correlates of private and Academic Performance of Secondary Schools in Oyo State. A Proposal presented at the higher students. Joint Staff Seminar Department of Teacher Education.* Ibadan: University of Ibadan.
- Adeyela, J. (2000). *Problems of Teaching Science in Large Classes at the Junior Secondary School Level. Implications for Learning Outcome.* Ibadan: Unpublished M.Ed Thesis. University of Ibadan.
- Ali, S., Haider, Z., Munir, F., Khan, H., & Ahmed, A. (2009). Factors Contributing to the Students' Academic Performance: A Case Study of Islamia University Sub- Campus. Retrieved February 23, 2019, from <https://doi.org/10.12691/education-1-8-3>
- Aremu, O. A. (2000). *Academic performance 5 factor inventory.* Ibadan: Stirling-Horden. Asiyai, R. I. (2012). Indiscipline in Nigerian secondary schools. Delta State University, Abraka, Nigeria
- Bakare, A., & Asikhia, T. (1994). *Individual performance.* Retrieved February 23, 2019, from <https://pdfs.semanticscholar.org/fa47/dc53f2c7f9ef8e4cd2ad1fb27dd50dfe4741.pdf>
- Buabeng, I., Ntow, F.D & Otami, C.D. (2020). Teacher Education in Ghana: Policies and Practices. *Journal of Curriculum and Teaching*, 9 (1), 86-95
- Daisy, I., & Buloubomere, I. (2013). Student Nurses Perception of Poor Academic. Retrieved February 24, 2019, from <http://www.iosrjournals.org/iosr-jnhs/papers/vol7-issue3/Version-6/D0703062229.pdf>
- Engin-Demir, P, O. (2009). Factors affecting the academic achievement of Turkish Urban Poor. *International Journal of Educational Development*. 29 (1), 17 – 29.
- Etsey, Y. K. A., Amedahe, F. K. & Edjah, K. (2004). *Do private primary schools perform better than public schools in Ghana?* Cape Coast: Unpublished Paper. Department of Educational Foundations, University of Cape Coast.
- Fabunmi, M., Brai-Abu, P., & Adeniji, I. A. (2007). Class Factors as determinants of secondary school students' academic performance in Oyo State, Nigeria. *Oyo State: Journal of Social Science*, 14 (3), 243-247. Retrieved January 6, 2019, from <http://www.krepublishers.com>.
- Farooq, M. S., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. Retrieved January 6, 2019, from <http://www.sciepub.com/reference/66037>
- Frimpong, E. A., Agyeman, G. A., & Ofosu, F. (2016). Institutional Factors Affecting the Academic Performance of Polytechnic Students in Ghana. Retrieved January 20, 2019, from https://www.ijhss.com/files/Emanuel_914oty7l.pdf
- Harbison, O., & Hanushek, P. (1992). *Educational Performance of the Poor: Lessons from Rural Northeast Brazil.* New York: Oxford University Press for the World Bank.
- Isangedigh, A. J. (1988). Under achievement: An index of learner-environment mismatch. *Nigeria Journal of Educational Psychology*. 3 (1), 220-226.
- Kraft, R. J. (1994). *Teaching and Learning in Ghana.* Retrieved March 22, 2019, from <https://www.ajol.info/index.php/ajesms/article/download/38602/59604>

- Larson, A. G. (2015). Use of Social Media and its Impact on Academic Performance of Tertiary Institution Students : A Study of Students of Koforidua Polytechnic , Ghana. Retrieved March 23, 2019, from <https://files.eric.ed.gov/fulltext/EJ1083595.pdf>
- Lockheed & Verspoor. (1991). *Scope and sequence of information*. Retrieved March 24, 2019, <http://documents.worldbank.org/curated/en/279761468766168100/pdf/multi-page.pdf>
- Macfarlane, B., & Macfarlane, B. (2010). Teaching in Higher Education Dealing with Dave's Dilemmas :exploringthe ethics of pedagogic practice. Retrieved March, 24, 2019, from <https://doi.org/10.1080/13562510220124222>
- Mensah, R.O. (2020). Pedagogical Analysis of Teaching Social Studies: An Empirical Literature Review. *Journal of Humanities and Social Sciences*,3(2), 66-76
- Mensah, R.O. (2020). The Attitude of Students towards the Learning of Social Studies and Their Performance: The Case of Accra Metropolitan Assembly in the Greater Accra Region of Ghana. *The International Journal of Humanities & Social Studies*, 8(2), 168- 174
- Mensah, R.O., & Frimpong, A. (2020). Factors Affecting Students' Attitude towards the Learning of Social Studies in the Accra Metropolis of Ghana: A Mixed Method Analysis. *Journal of Educational and Psychological Research*, 2(1), 33-42
- Mushtaq,I., & Khan, S. N. (2012).Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Redearch*, 12(9), 17-22.
- Odumah, L., Babah, P.A., Mensah, R.O., Yalley, C. E., & Sakyi-Darko, M. (2020). Assessing the Pedagogical Approaches to Social Studies Tutors Instructional Delivery in the Colleges of Education in the Eastern and Greater Accra Region of Ghana. *Journal of Studies in Education*, 10(4), 14-30
- Ogunleye, B. O. (2002). *Evaluation of the Environmental Aspects of the Senior Secondary School Chemistry Curriculum in Ibadan*.Ibadan: Unpublished Ph.D Thesis, Department of Education, University of Ibadan.
- Reda, H., & Mulugeta, G. (2018). Investigating the Causes of Students ' Less Academic Performance in Engineering College of Debre Berhan. Retrieved March 24, 2019, from <https://doi.org/10.11648/j.ajtas.20180703.15>
- Salfi, N. A., & Saeed, M. (2007). Relationship among school size, school culture and students' achievement at secondary level in Pakistan.*International Journal of Educational Management*. 21 (7) 606–620.
- Tremblay, S., Ross, N., & Berthelot, J. (2001). Factors affecting Grade 3 student performance in Ontario: A multilevel analysis. *Ontario Educational Quarterly Review*. 7 (4), 1–12. Retrieved February 26, 2019, from <http://www.geog.mcgill.ca/faculty/grade3ontario>.