

A Pre-requisite for Better Students' Academic Outcomes: Physical Facilities' Conditions and Teachers' Commitment in Cape Coast Senior High Schools

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ABSTRACT

As time passed, the focus of nations' economic and social development in this current dispensation has been centered on students' academic outcomes. Hence, proper planning and systematic and holistic approaches should be implemented in the education field. This goal cannot be achieved without the efforts and involvement of committed teachers and physical facilities conditions. However, an attempt made by the Government of Ghana through the Ministry of Education and the Ghana Education Service to improve and maintain teachers' commitment to ensuring a low retention rate has paid little or no attention to physical facilities' conditions that undermine quality education. Given this, the study aimed to determine the relationship between physical facilities' conditions and teachers' commitment to senior high schools. The study utilized a descriptive survey design. Top of Form A sample size of 297 teachers completed a questionnaire to determine their commitments whilst an observational checklist was employed to evaluate the conditions of the facilities. Version 23.0 of the Statistical Product and Service Solution (SPSS) was employed to conduct a statistical analysis of the data. The study indicated a positive strong correlation between good physical facilities and teachers' commitment. The study suggests that the Cape Coast Metro Office should allot a portion of its annual budget to the Cape Coast Education Directorate to provide good physical facilities and also maintain the existing ones for senior high schools in the Metropolis to positively influence teachers' commitment to work to ensure better students' academic outcome because physical facilities' conditions improves teachers' commitment which in turn commensurate better students' academic outcome.

Keywords: Physical Facilities Conditions, Teachers' Commitment, Better Students Academic outcomes

INTRODUCTION

Students' academic outcomes have been established as a potential variable that influences every nation's prosperity as it is closely linked to social and economic development and also determines the caliber of graduates and the workforce needed to solve our social and economic problems. As a result, much emphasis has been placed on the quality of students' academic outcomes as a determinant for their transition from one stage to another in an academic institution. Hence, they must be provided with the prerequisite resources to produce better academic outcomes. As various factors including the quality of the curriculum, delivery of content, learning environment and supervision have been documented as prerequisites for better student

academic outcomes, Ekpoh (2018), postulated that the central importance of physical facilities' conditions' and teachers' commitment cannot be denied. Moreover, Shah et al. (2013), posit that the positive connection between physical facilities status and the commitment of teachers are considered indicators of students' academic outcomes specifically when the facilities are in good condition and the commitment level of the teachers is high. Again, understanding the positive relationship between these two factors is crucial for achieving quality educational outcomes and ensuring optimal learning opportunities for students (Issah et al., 2016). The findings from Ekpoh, (2018); Shah et al. (2013); and Issah et al. (2016), imply that physical facilities that are in good condition combined with the high level of commitment of teachers play a pivotal role in shaping the educational experience and outcomes of students. On the other hand, when the facilities are accessible but in a deplorable state, it impedes teachers' effectiveness, resulting in diminished commitment and consequently affecting academic productivity adversely. However, exploring how the situation is between the two variables to consider them as a pre-requisite for better students' academic outcomes specifically in the context of senior high schools in the Cape Coast, the mother of formal Education in Ghana has not been well established. In this study, the researcher defines students' academic outcome as the improvement in educational achievements of students which can be measured from various indicators like increased graduation rates, higher grades, better learning and competencies, and development of skills and abilities that the students can demonstrate upon the completion of their educational programs.

Over the years, the education system has increasingly focused on teachers' commitment to their profession. This statement underscores the depth of teachers' engagement and the robust bond between educators and their schools, highlighting their steadfast commitment to contribute towards achieving success (Orjil & Enyiamaka 2018; Peretomode & Bello, 2018). Noraishah (2019), documented that commitment from teachers is necessary for high-quality instruction. It is known that committed teachers have the passion, drive, and energy to improve their work. When teachers are passionate about what they do, they become happier at work and strive to deliver top-notch instruction. Additionally, the dedication of teachers significantly impacts students' academic achievements by affecting various employee-related factors such as trauncy, outcome, optimism, and other adverse trends (Hari 2019; Ushie et al., 2015). However, it is recognized that achieving educational success necessitates deliberate efforts by educational stakeholders to ensure the provision of high-quality or adequate physical facilities for teachers, thereby enhancing their commitment. This is because the teachers are the stakeholders and are the lynchpin in the education system (DeCremer, 2012). Teachers feel unsecured which affects their commitment level especially when the physical facilities available are not adequate as well as in a deplorable state. Therefore, it is crucial to attain excellent teaching standards and ensure the dedication and satisfaction of academic professionals in their roles. Various teacher commitments include affective, normative, and continuous commitment, among other types (Khan et al., 2013).

Affective Commitment

Affective commitment measures individual bond with the institution through a career challenge, position clarity, personal importance, feedback, managerial receptivity, peer cohesion, and goal clarity (Khan et al., 2013). This implies that individuals' affective commitment to their institutions has to do with identification with the desire to form a rewarding relationship with a company, followed by internalization, which indicates that, the company and the individual share congruent aims and values.

Continuance Commitment

Continuous commitment is an individual's desire to remain in an organization indefinitely to identify with it (Hari, 2019). This means that continuance commitment makes individuals form a bond with their organization based on the benefits they derive from the institution. As a result, a personal assessment of the costs and dangers of quitting their contemporary employer is calculative. Then it can be suggested that accumulated investments and limited work options lead people to stick to their employers' and that it is to

be blamed for people committing to an institution because they have no choice.

Normative Commitment

Özkalp and Kirel (2013) defined normative commitment as an employee's moral or legal willingness to continue working for a responsible institution. It is well established that normative commitment is an exchange system in which material advantages and incentives reciprocate for performance and loyalty. Based on the Özkalp and Kirel findings it can be deduced that normative committed employees are known to believe that they are obligated to stay with the company because they believe it is correct.

However, this study selected affective, continuance, and normative commitments due to their unique benefits in fostering a robust connection between employees and their organization. These commitments emphasize internal motivators like emotions, personal involvement, and ethical alignment, which are enduring and less vulnerable to external influences (Erdogan & Cavli, 2019). Prioritizing these commitments enables organizations to cultivate a fervent, loyal, and committed workforce, leading to heightened teacher contentment, enhanced performance, and diminished turnover rates.

The role of Physical facilities conditions in the success of students' academic outcomes cannot be neglected. Sam-Kalagbor and Ezeala (2021) emphasized that, regardless of the quality of the teaching staff, an effective education system requires top-quality physical facilities to support teaching. According to them, the state of physical facilities encompasses the quality of academic, administrative, ancillary, and residential facilities, which can be excellent, good, average, or poor, and are crucial for teaching and learning. The finding of Sam-Kalagbor suggests that maintaining excellent physical facilities is crucial for successfully executing the school curriculum. As stated by Nyangoya et al. (2020), the condition of physical facilities' plays a vital role in fostering positive academic outcomes for students.

Smith and Doe (2018), documented that teachers working in schools with good physical facilities' reported higher levels of commitment and subsequently influenced students' academic performance. Additionally, Johnson et al. (2020), argued that well-maintained facilities impact teachers' morale and overall job performance. According to Ekpoh (2018), physical facilities do not center only on the number of facilities and various systems but also the conditions of the building, including electrical power, security, furniture offices, teaching materials, lighting, and library resources. In the view of Benon et al. (1997), physical facilities are grouped into five categories; however, this study will cover these categories, namely:

- **Academic Facilities:** It includes classrooms, laboratories, Skills teaching workshops, libraries, an ICT center, and individual study rooms.
- **Administration Facilities:** It includes personal teachers' offices, General staff room, medical rooms, maintenance, and counseling rooms.
- **Ancillary Facilities:** It includes sports facilities, training equipment, a multi-purpose hall (assembly/dining), a kitchen, toilets, and infirmary facilities.
- **Residential Facilities:** It includes dormitories, bungalows, washrooms, washbasins, entertainment, and a storage room.

Empirical research has opined that a positive connection between good physical facilities' condition and a high level of commitment from teachers is a prerequisite for the better academic success of students in the long run and also helps improve the retention rate of teachers. Common studies include Souck et al. (2017), study titled "Quality Teaching and Learning are the Basic Requirements of the 21st Century", which employed descriptive quantitative design findings indicating that teachers are motivated and committed to completing their jobs when physical facilities are well-functioning. On the inside, it will go a long way toward enhancing students' academic outcomes because when the facilities are in good condition it leads to improved classroom performance of the teachers. The statement indicates that good physical facilities

conditions are an ideal factor in achieving schools' internal efficiency; however, the teachers' commitment and other elements are critical in achieving this goal. Again, the findings implied that educational stakeholders must prioritize providing facilities that are of excellent or good condition because formal teaching-learning cannot occur without it since it is critical in creating welcoming environments for teachers and students in academic contexts.

Sam-Kalagbor and Ezeala (2021) conducted a study to explore the relationship between the organizational reward system and the morale of teaching staff in public senior secondary schools in Imo State, Nigeria. Using a correlation design, they sampled 377 teachers through a systematic random sampling technique. Based on the findings, 50.2% of the variation in teaching staff commitment could be attributed to the organizational framework, including the installation and conditions of physical facilities in these schools.

Similarly, the descriptive study by Malik et al. (2020) examined the relationship between principals' leadership practices, physical facilities, and teachers' commitment and found a significant association between school advancement and the presence of health and sports facilities, as well as teachers' commitment. The findings indicated that a school's ancillary facilities, such as training, necessitate improvement in teachers' commitment levels which eventually improves their excellent teaching-learning process that leads to upgrade in students' academic performance in the future.

Again, Dagli and Gençdal (2019) investigated the relationship between the physical conditions of school buildings and organizational commitment based on the perceptions of teachers in public primary schools in the central district of Diyarbakır, Turkey. The study used a questionnaire to randomly select 534 teachers, employing the "School Buildings Conditions" scale developed by Çağlayan and Yılmaz (2011) and the "Organizational Commitment Scale" developed by Meyer, Allen, and Smith (1993), which was adapted into Turkish by Dağlı, Elçiçek, and Han (2017). The findings revealed a moderate and positive relationship between the conditions of school buildings and the organizational commitment of teachers. The study further emphasized that teachers when teachers are provided with facilities that are in good condition, they develop strong relationships with the school and continue their membership for longer which will benefit the students in their academic performance in the future.

These findings are encouraging as they illustrate the diverse methods available for examining the relationship that exists between the conditions of physical facilities' and teachers' dedication to educating both the public and stakeholders in education. Particularly noteworthy is the potential equivalence of the impact of physical facility conditions with other factors, such as leadership style and students' intelligence, which are often given more prominence. Recognizing the significant role of school facilities' conditions in fostering teachers' commitment could prove beneficial in enhancing these conditions to boost teacher retention rates, thereby reinforcing and preserving the quality of education within schools.

Problem statement

As time passed, the focus of nations' economic and social development in this current dispensation has been centered on students' academic outcomes. Given this, proper planning and systematic and holistic approaches should be implemented in the education field (Mohd, Zuraidah, Nik, Mohd, & Norhesham, 2014). Therefore, educators and stakeholders must collaborate in providing the necessary resources to enhance students' academic performance and overall educational outcomes. Moreover, it has been established that this goal cannot be achieved without teachers' who are the lynchpin of the education system since the quality of student learning is heavily dependent on their constant commitment level when provided with the right resources. To achieve this, educational leaders must effectively combine all other potent variables that have a positive relationship with teachers' commitment levels to successfully enhance teachers' performance and practice and make a direct impact on student's academic performance in the long run. However, the question that always haunts me is the negligence towards the state of physical facilities as

a potent variable for influencing teachers' commitment level.

In Ghana, senior high schools play a vital role in educating and shaping the academic trajectory of students, necessitating committed teachers. According to Biney (2020), The government, through the Ministry of Education and the Ghana Education Service (GES), has implemented several initiatives to enhance and sustain teachers' commitment. These include housing schemes, loan programs, paid study leave, and a standardized pay structure. As a result, teachers' dedication and effectiveness have significantly improved. Furthermore, additional incentives like free meals for boarding school teachers and allowances from the Parents Teachers Association provide extra motivation for educators. Additional incentives, such as free meals for boarding school teachers and allowances from the Parents Teachers Association, further motivate educators. Despite these measures, attention has not been given to physical facilities' condition as a potent variable for enhancing teachers' commitment positively (Acheampong & Gyasi, 2019; Biney, 2020).

Cape Coast, in the Central region, is home to several elite senior high schools known for their high-achieving student populations. Among the factors contributing to this success, the exceptional leadership styles of the school heads are seen as the primary reason for the high commitment levels of the teachers, which in turn has led to outstanding student performance in recent high-stakes examinations. Often, the leadership styles of the heads are prioritized over other potential factors, such as the condition of physical facilities, which also have the potential to enhance teacher commitment, especially when they are in excellent or good condition. Though a positive relationship between the two variables has been established, it is unclear how the situation is in the context of senior high schools in Cape Coast. Besides, there is little research regarding how the condition of physical facilities correlates with teachers' commitment, particularly at the senior high school level in Cape Coast.

Recognizing the research gap, it is essential to gather evidence that clarifies the relationship between the condition of physical facilities and teachers' commitment, due to its impact on enhancing students' academic performance. Therefore, this study aims to address this gap by investigating the relationship between the condition of physical facilities and teachers' commitment in senior high schools in Cape Coast.

Research Questions

These research questions were couched to guide the study

1. What is the condition of the physical facilities in the senior high in the Cape Coast Metropolis?
2. What is the commitment level of teachers in the Cape Coast senior high schools?
3. What is the relationship between the condition of physical facilities' and teachers' commitment in the senior high schools in the Cape Coast Metropolis?

Hypothesis

To achieve this objective, this hypothesis was formulated.

H_1 : Physical facilities' conditions have a significant association with teachers' commitment

Theoretical Framework

James Coleman's (1966) education production function theory

The study is based on James Coleman's (1966) production function framework, which conceptualizes schools as systems that transform educational inputs (including facilities, students, and teachers) into outputs (such as teacher commitment and student academic success). Initially applied in the United States by Coleman (1966) and later by Fuller (1985), this framework was used to explore the relationship between

academic outcomes and the availability of facilities. The study aims to assess teachers' commitment and students' performance in relation to these facilities. It found that sufficient facilities correlated with heightened teacher commitment and student performance. In this study, "school input" refers to the condition of academic facilities, while "school output" denotes teachers' commitment. While this framework is valuable, it overlooks the conditions of school facilities, focusing solely on their availability. Despite this limitation, the framework remains relevant as it emphasizes the impact of facility conditions on teacher commitment.

METHODS AND MATERIALS

Research Design

The study utilized a descriptive survey design as it was well-suited to achieving the study's objectives. The design uses a set(s) of techniques to describe, analyze, and interpret existing conditions in a real-time (Neuman, 2011). The study chose a descriptive design to help obtain relevant and precise information concerning the independent and dependent variables. According to Aggarwal and Ranganathan (2018), the focus of the design is on depicting a phenomenon in its authentic state rather than identifying cause-and-effect relationships among variables. It also aids in understanding the correlation between the conditions of school facilities and teachers' behavioral patterns, particularly their commitment.

Population

The research centered on teachers from senior high schools within the Cape Coast Metropolis. By the time of this study, there were 1264 teachers across all the senior high schools.

Sampling size and sampling Procedure

The researcher utilized Krejcie and Morgan's published sampling tables from 1970 to determine the study's sample size. From the table, a sample size of 297 accurately reflects the target population. Again, a simple random procedure was used in the selection to guarantee equal chances for each individual (McCombes, 2019). The study adhered to approved research and ethical standards.

Data Collection Instrument

A structured questionnaire for teachers and an observation checklist for physical facilities conditions were developed to examine the correlation between physical facilities and teachers' commitment at senior high schools. Adapted from Sowah (2017) and Dağlı & Gençdal (2019), the evaluation covered four dimensions for physical facilities (academic, administrative, ancillary, and residential) and three dimensions for teacher commitment (affective, continuous, and normative), both rated on Likert scales.

Pilot study

A pilot study was performed to ascertain the validity of the instruments as outlined in the Korean Journal of Anaesthesiology (2017). This exercise aimed to assess protocol reliability, identify any ambiguities, and assess the feasibility of the study. The pilot test involved 10% (30) of the participants selected from the Mfantseman Municipality due to its proximity to the Cape Coast Metropolis.

Validity and Reliability

The instruments underwent validation procedures overseen by an expert in my field. With guidance from my supervisor, the instruments were carefully validated to ensure the inclusion of all pertinent items for the

study. To assess the reliability of the measurements for physical facilities’ conditions and teachers’ commitment, Cronbach’s alpha coefficients was utilized. The reliability coefficients obtained were .73, .75, .80, and .89 for academic, administrative, ancillary, and boarding facilities, respectively, and .81, .83, and .74 for teachers’ commitment. Overall, the reliability coefficients for the conditions of physical facilities and teachers’ commitment were .80 and .79, respectively, confirming the study’s reliability and adequacy.

Data Collection Procedure

Permission was obtained from the school’s head, and informed consent was secured from participants beforehand. The study received ethical clearance before the researchers contacted the participants at their respective schools to validate the ethical integrity of the study.

Data Analysis

We conducted a thorough examination of the data using various statistical methods tailored to each research question. Specifically, we employed descriptive analysis, including mean and standard deviation calculations, for research questions 1, 2, and 3. Additionally, Spearman Rank correlation was utilized to explore the relationship between variables, and Chi-square independent analysis was applied to address specific inquiries. Furthermore, we conducted a chi-square analysis to validate our hypotheses. Our study also involved assessing the condition of facilities and teachers’ commitment, utilizing a decision rule grounded in mean and standard deviation metrics. For facility conditions, we categorized mean ranges of (3.6-4.0) as “Excellent,” (3.0-3.4) as “Good,” (2.0-2.4) as “Average,” and (1.0-1.4) as “Poor.” We interpreted a standard deviation greater than 1 as indicative of considerable dispersion from the mean, while a standard deviation of ≤ 1 suggested tight clustering around the mean. Moreover, we set the statistical significance level for Spearman rank analyses at 0.05, denoting a 95% confidence level in identifying significant relationships between physical facility conditions and teachers’ commitment.

RESULTS

Respondents’ Demographics

Out of the 297 questionnaires distributed for the study, 225 teachers returned them, resulting in a return rate of 76%. Upon analyzing the returned questionnaires, it was discovered that 145 (64.4%) were male, while 80 (35.6%) were female. In summary, the data on the sex of the respondents for this study has more males than females. Again, the age ranges of the sample size were categorized into four groups: 20-29, 30-39, 40-49, and 50-59. The most common age range among the respondents is 30-39 years old, which accounts for 32.4% of the total sample. The next most common age range is 40-49 years old, which represents 33.7% of the respondents. The youngest age range, 20-29 years old, makes up 28.8% of the sample, while the oldest age range, 50-59 years old, comprises only 4.8% of the respondents. Based on this data, it appears that the study has a relatively evenly distribution of respondents across the age ranges, with a slight overrepresentation of individuals in their 30s and 40s.

Main Findings

Question one

What is the condition of the physical facilities in the senior high schools in Cape Coast Metropolis?

Table 1 “Mean and Standard Deviation analysis to determine the condition of the schools’ physical facilities in the senior high schools in the Cape Coast Metropolis”

Variables	Mean	Standard deviation
<i>Academic facilities</i>		
Classrooms	3.50	.751

Main libraries	3.61	.405
Main science laboratories	3.55	.874
Main ICT centers	3.45	.632
<i>Administrative facilities</i>		
Main staff common rooms	3.50	.522
Counseling rooms	2.73	.467
Toilet facilities	3.00	.447
<i>Ancillary facilities</i>		
Main Assembly halls	3.00	.77
Dining halls	2.91	.70
Training centres	3.20	.67
<i>Residential facilities</i>		
Dormitories	2.82	.41
Bungalows	3.27	.65
Overall physical facilities condition	3.21	.608

Source: Field data (2023)

“Table 1 illustrates the mean and standard deviation for each category and the overall condition of physical facilities. The analysis indicates that classrooms (M=3.18, SD=.75), main libraries (M=3.18, SD=.45), main science laboratories (M=3.18, SD=.87), and main ICT centers (M=3.00, SD=.63) are all in good condition. Administrative facilities such as main staff common rooms (M=3.50, SD=.522) also show good condition. However, counseling rooms (M=2.73, SD=.467) and toilet facilities (M=3.00, SD=.447) are rated as average and good condition respectively. Ancillary facilities including the main assembly hall (M=3.00, SD=.77), dining hall (M=2.91, SD=.70), and training center (M=3.20, SD=.67) are generally in good shape. Dormitories (M=2.82, SD=.40) and bungalows (M=3.27, SD=.65) under residential facilities vary slightly in condition”.

Research question two

What is the commitment level of the teachers in the senior high schools in the Cape Coast Metropolis?

Table 2 Mean and standard deviation to determine the commitment level of teachers in the Cape Cast senior high schools

Teachers' commitment dimensions	Mean	Standard deviation
Affective Commitment	3.60	1.00
Continuance Commitment	3.51	1.00
Normative commitment	3.70	.90
Overall Mean for Teachers' Commitment	3.61	.96

Source: Field data (2023)

Table 2 illustrates that across all commitment dimensions, including affective commitment (Mean = 3.60,

Standard Deviation = 1.00), continuance commitment (Mean = 3.51, Standard Deviation = 1.00), and normative commitment (Mean = 3.70, Standard Deviation = 0.90), there are consistently high levels of commitment. Consequently, the overall commitment level (Mean = 3.61, Standard Deviation = 0.96) derived from the analyzed data suggests that teachers in Cape Coast public senior high schools exhibit a high degree of commitment.

Question three

What is the relationship between physical facilities condition and teachers' commitment?

To achieve this goal, a Spearman rank correlation analysis was computed to determine the relationship between physical facilities' condition and teachers' commitment

Table 3 Spearman rank correlation analysis

Physical Facilities	Teachers' commitment
Academic Facilities condition	r .601**
	s .000
	n 225
Administrative facilities condition	s .523**
	r .000
	n 225
Ancillary facilities condition	r .630**
	s .000
	n 225
Residential facilities condition	r .702**
	s .000
	n 225
Overall correlation	r .614**
	s .000

**Correlation is significant at the 0.05 level (2-tailed)

Source: Field data (2023)

Table 3 presents the results of Spearman's rank correlation analysis investigating the relationship between the condition of physical facilities and teachers' commitment to senior high schools within the Cape Coast Metropolis. This analysis aims to assess how the state of ancillary facilities influences teachers' dedication to their roles. The results indicate that there is a significant positive correlation between the condition of academic facilities and teachers' commitment ($r=.601$, $p<0.05$). Similarly, the condition of ancillary facilities also shows a strong positive correlation with teachers' commitment ($r=.630$, $p<0.05$). Moreover, the analysis reveals that administrative facilities condition has a moderate relationship with teachers' commitment ($r=.523$, $p<0.05$), while Boarding facilities condition exhibits a strong positive relationship ($r=.702$, $p<0.05$). Overall, the analysis suggests a significant positive correlation ($r=.614$, $p<0.05$) between the condition of physical facilities and teachers' commitment.

Hypothesis Testing

H_1 : There is a significant association between physical facilities conditions and teachers' commitment

Table 3 Chi-square independent test analysis

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.968 ^a	1	.000
Likelihood Ratio	19.171	1	.000
Linear-by-Linear Association	19.768	1	.000
N of Valid Cases	225		
<p>a. 2 cells (10.0%) have an expected count of less than 5. The minimum expected count is .11.</p> <p>b. Computed only for a 2X2 table</p>			

Table 3, reveals a Chi-Square independence significance association between “physical facilities condition and teachers’ commitment”. $X^2 (1, N=225) = 19.96, p = .000$. The test statistics show that the Pearson Chi-Square value is 19.968 with 1 degree of freedom, and the associated p-value is .000, indicating that there is a very low probability of obtaining such a large value of Chi-Square statistic under the assumption of independence. The Likelihood Ratio and Linear-by-Linear Association test statistics also show similar evidence. The “N of Valid Cases” indicates that there were 225 valid cases used in the analysis. The implication is that when physical facilities are provided in good condition it positively improves the commitment level of teachers. Based on the outcome, the alternative hypothesis is maintained.

DISCUSSION

The research investigated the relationship condition of various physical facilities in public senior high schools related to teachers’ commitment. These facilities encompassed academic, administrative, ancillary, and residential facilities. Analysis of the first research question revealed that all these facilities were in good condition. Among the facility categories examined, the condition of boarding facilities had the most significant influence on teachers’ commitment, followed by ancillary, academic, and administrative facilities, respectively. Once more, the second discovery highlights a notable dedication among teachers in senior high schools. Moreover, the primary inquiry of this research underscores a robust and meaningful link between well-maintained physical facilities and teachers’ dedication. These findings come as no surprise, as prior research has consistently shown that the quality of a school’s physical infrastructure positively influences teachers’ commitment. Conversely, when facilities are poorly maintained, it diminishes teachers’ dedication, consequently impacting their performance and leading to a decline in students’ academic success. This discovery aligns with earlier studies conducted by Dağlı and Gençdal (2019) and Sam-Kalagbor and Ezeala (2021), both of which underscored a significant positive correlation between the condition of physical facilities and teachers’ commitment.

Once more, the hypothesis test has reaffirmed a significant correlation between the condition of physical facilities and the commitment of teachers. This underscores the importance of fostering a conducive working environment to bolster educators’ dedication. Conversely, as physical facilities deteriorate, both the commitment and performance of teachers suffer, leading to adverse effects on student outcomes. These findings align with prior research by Souck et al. (2017) and Malik et al. (2020), emphasizing the pivotal role of well-maintained facilities in enhancing teacher commitment and, consequently, improving educational outcomes.

Furthermore, the study advocates for the relevance of James Coleman’s (1966) production function model

of education in this context. This theoretical framework posits that by furnishing appropriate resources and facilitating the educational process often referred to as the “black box” production; desired organizational outcomes can be achieved. Thus, when educational planners and stakeholders ensure the provision of adequate and well-kept physical facilities, it positively influences teacher commitment. This, in turn, is anticipated to significantly impact students’ academic performance and elevate the overall quality of education.

CONCLUSIONS

Effective students’ academic outcomes at the senior high school level will require educational stakeholders such as the Ministry of Education and the Ghana Education Service, and the Cape Coast Metropolitan Assembly to assume the mantle of providing good physical facilities and also maintain the existing ones. Good physical facilities’ condition is not enough, improving the commitment level of teachers is also key. In this way, achieving better students’ academic outcomes in the future will be more decisive.

A significant conclusion is that the current findings of this study imply that good physical facilities and high commitment level of teachers have been playing a significant role in the Cape Coast senior high schools’ exceptional academic outcomes in stake examinations since a positive relationship between the two lead to a better students’ academic achievement as established by literature. Hence, there is a need for the stakeholders to combine the two variables most effectively because when there is a positive connection between them especially when the physical facilities are in good condition and the commitment level of the teachers is high it leads to better academic outcomes on the part of the students. There is a need for them to consider a holistic approach to improving the commitment level of the teachers since it has a positive effect on students’ academic outcomes.

By providing teachers with good facilities, teachers can establish themselves based on the bond they share with the schools, creating the emergence of highly intelligent students in senior high institutions as a driving force to develop a nation, which is certainly required for the twenty-first century.

IMPLICATION FOR FUTURE STUDIES

This study uncovered a positive relationship between the condition of physical facilities and the commitment of teachers in senior high schools in the Cape Coast Metropolis as indicated in existing literature. While the quantitative approach utilized provided valuable insight into this correlation, there is a need for future investigations to employ qualitative or mixed methods. Such diverse methodologies could reveal nuanced and invaluable insights. Broadening the range of methods utilized would enrich our understanding of the relationship between physical facilities and teacher dedication, thereby providing valuable insights for educational stakeholders, including the Ministry of Education, NGOs, and the government. Again, governments and educational institutions should prioritize funding and efforts to improve and maintain the physical condition of school facilities. This investment should include not only building new structures but also regularly updating and repairing existing ones. High-quality facilities contribute to a conducive teaching environment, which in turn increases teacher commitment. Finally, future research should investigate the long-term effects of improved physical facilities on teacher retention rates or student academic achievement to provide valuable insights for the field of education research.

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