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**Perceived Impact of COVID-19 on Students' Academic Performance in  
Colleges of Education in Ghana**

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in Ghana**

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**Abstract**

**Purpose:** This study investigated the perceived impact of COVID-19 on students’ academic performance in Colleges of Education in Ghana.

**Methodology:** Descriptive survey design was adopted for the study. A sample of 346 students was selected from a population of 3,500 students in three selected Colleges of Education in the Volta Region of Ghana using convenience sampling procedure. Data were gathered using questionnaire and analysed using means and standard deviation. Data were presented in tables after the analysis.

**Findings:** The study found that students found it difficult to focus during online lessons and that their academic performance had worsened due to the COVID-19 pandemic. In terms of the challenges encountered by students during the COVID-19 Pandemic, the study revealed that poor internet connectivity, lack of needed resources like laptops to access online learning system and lack of conducive learning atmosphere in the house were identified. From the results, it was concluded that the COVID-19 Pandemic at its peak has been detrimental to the academic performance of students in Colleges of Education in Ghana.

**Unique Contribution to Theory, Practice and Policy Recommendation:** The study highlighted the fact that students can learn not only in-person but can engage in remote learning. This backed the position of the Transactional Distance Theory used in the study. In improving learning in the wake of COVID-19, Colleges of Education should provide platforms for online learning with easy access and usage for students. Generally, policy makers should make policies that would make online learning a part of the education system at all levels of education. This would be a positive adjustment caused by the COVID-19 outbreak.

**Keywords:** *COVID-19, Pandemic, Academic Performance*

## INTRODUCTION

Since the first cases of the Coronavirus Disease 2019 (COVID-19) were confirmed in China in late December 2019, the virus has spread rapidly across the globe. It became a shared global experience, inescapable on every continent and affecting all members of society (Whitley, Beauchamp & Brown, 2021). COVID-19 since its discovery has been very impactful. The impact has been seen across every aspect of society so much that it dictated a new of life (Gaspard-Richards et al., 2021).

In the wake of the COVID-19 pandemic, most governments have responded in a variety of ways, making policy decisions and taking actions in response to both health and economic demands. According to McKay et al. (2021), the COVID-19 pandemic and associated rapid spread of the virus compelled many governments to declare a national state of disaster. Some countries implemented a series of regulations and protocols to mitigate the spread of the virus. These measures adopted by governments have affected individuals, groups, and communities to varying degrees (Bascaramurty & Alphonso, 2020). This is because most of the measures put in place in most countries included that travel restrictions, mandatory quarantines for travellers, social distancing, bans on public gatherings, schools and universities closure, business closures, self-isolation, asking people to work at home, curfews, and lockdown (Bedford, Gerry, Hatch, Rechner, Young & Watkinson, 2020; Gostin & Wiley, 2020). These restrictions and guidelines cut across every sphere of the economy of nations.

One major area which has been greatly affected by the COVID-19 pandemic is the education sector. In the early days of the pandemic, the impact of the disease was so strong that schools in 22 countries on three different continents closed down by mid-March 2020 and this resulted in more than 290 million students not having access to education in physical classroom environments (UNESCO, 2020). However, by ending of April 2020, UNESCO report indicated that classroom learning had been interrupted for 90% of students worldwide. Specifically, the report showed that 191 countries closed their schools at all levels, halting schooling for 1.5 billion students while about half of the affected students had no access to online learning while the schools remained closed (UNESCO Institute for Statistics, 2020).

From the forgoing, it appears that the COVID-19 pandemic has changed the lives of large numbers of students, teachers, and parents around the world, with millions now teaching and learning remotely from home. Most educational institutions around the world have been forced to transition to online teaching and learning because of the COVID-19 pandemic (Hoofman & Secord, 2021). However, the transition to an online education in the wake of the COVID-19 pandemic may bring about adverse educational changes for students at all levels of education. The shutdown of schools, compounded by the associated public health and economic crises, poses major challenges to students and their teachers. This is because in most countries, the public education system was not built nor prepared, to cope with a situation like the pandemic (García & Weiss, 2020). Most of the educational institutions lack the structures to sustain effective teaching and learning during the shutdown and to provide the safety net supports that many students receive in school.

### Problem Statement

As the global experience with COVID-19 shows, the education system in most countries were not adequately prepared for the pandemic, regardless of their development level (OECD, 2020; WHO, 2020; Lopes & McKay, 2020). The situation is much worse in the African context. This

is because, before COVID-19, the teaching profession particularly in Africa was already seen to be fragile and had numerous challenges like poor quality of teaching and inadequacy of teaching and learning resources (UNESCO, 2015). The COVID-19 pandemic has therefore stretched these existing challenges to a much worse extent in many African countries.

In Ghana, the first cases of COVID-19 were recorded on 12<sup>th</sup> March 2020. Since the first cases were recorded, the COVID-19 pandemic has had devastating economic, political, social, and health effects on the country (UNICEF Ghana, 2021). In response to the pandemic therefore, the Government of Ghana put in place several measures including the imposition of 'lockdowns' in which businesses, schools and commercial outlets were closed and individuals advised to remain at home, except for essential services such as purchasing food or receiving medical attention. These were to stop the spread of the virus. But as at the time of this study, July 31<sup>st</sup>, 2021, the Ghana Health Service records showed that Ghana had recorded 103,019 cases of COVID-19.

The lockdown interventions meant that students had to be in their homes and be engaged in academic work remotely. Thus, the education sector was forced to close all school activities in March 2020 to prevent the spread of COVID-19. All schools were thus required to adopt online approach to teaching and learning. Thus, almost invariably, many educational interventions relied on digital media in their teaching and learning.

The effectiveness of online teaching has however been questioned for varied reasons. For instance, students are mostly distracted with technology because researchers have found that in online learning, students may drift off into using the internet for other activities other than learning (Lepp, Barkley & Karpinski, 2014; Fox, Rosen & Crawford, 2009). Also, online learning is difficult since students may lack the digital skills and necessary devices needed to participate in academic work remotely.

It appears that the Colleges of Education in Ghana were less prepared just like most educational institutions to deal with the demands of remote learning caused by the COVID-19 pandemic. This is because as revealed by Tuffour, Cobbinah, Benjamin and Otibua (2021), Ghana's education system has greatly suffered because of the COVID-19 pandemic. Acknowledging the multiple efforts made by the Government of Ghana, there still remains a lot to be done in relation to dealing with how COVID-19 has affected the education sector. In comparison with the global picture, there is evidence that students' academic performance is deteriorating during the pandemic (García & Weiss, 2020). In this light, the current study sought to examine the perceived impact of COVID-19 on students' academic performance in Colleges of Education in Ghana. Specifically, the study aimed at answering the following questions:

1. What are the perceptions of students of Colleges of Education about the impact of COVID-19 on their academic performance?
2. What are the main challenges encountered by students of Colleges of Education in the process of learning during the COVID-19 pandemic?

## Literature Review

### Transactional Distance Theory

Transactional Distance Theory was propounded by Moore (1997). Moore's Theory of Transactional Distance has a direct bearing on e-learning (Bornt, 2011). This is because it explains and quantifies the learning relationship between instructor and student in the e-

learning situation, where there is a substantial physical or temporal distance between the two. Moore was of the view that transactional distance - as distinguished from physical or temporal distance - refers to the psychological or communicative space that separates instructor from learner in the transaction between them, occurring in the structured or planned learning situation (Moore, 1997).

The term “transactional distance” was first used in Boyd’s 1980 Handbook of Adult Education (Boyd & Apps, 1980, p. 19). Originating with John Dewey, the concept of transaction implies “the interplay among the environment, the individuals and the patterns of behaviours in a situation” (Boyd & Apps, 1980, p. 5). Thus, the “transaction” in distance education is the interplay of the behaviours of teachers and learners in environments in which they are in separate places and have to communicate through a technology.

From the forgoing, it can be seen that the view of Culatta (2022) is accurate, that, transactional distance theory posits that distance education is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept. In Moore’s theory, three clusters of variables control the extent of transactional distance: of interactions between teachers and learners Dialogue, Structure, and Learner Autonomy (Bornt, 2011). Structure is also viewed as the rigidity or flexibility of the course’s educational objectives, teaching strategies, and evaluation methods (Moore, 2018). Thus, it describes the extent to which a course can accommodate or be responsive to each learner’s individual needs and preferences.

Dialogue has to do with the interactions between teachers and learners. Thus, regarding dialogue, Moore was of the view that both the teacher and students should be respective and active participators in the class (Bornt, 2011). Thus, all students should participate in the lessons. Finally, concerning learner autonomy, Moore stressed that the extent to which learners participate in making decisions normally reserved exclusively for teachers, decisions about what to learn, how to learn, and how much to learn, is labelled as “autonomy” (Moore, 2018).

In the transactional distance theory of Moore, managing transactional distance requires more than deciding the structure of the lesson and skillful management of dialogue in presenting it, but also requires knowledge about the ability of each student to manage his or her engagement with varying degrees of those teaching procedures. Even though the theory was originally designed for distance education, it is of relevance in the current study because the COVID-19 pandemic led to colleges of education closing in-class lectures and resorting to online classes. This meant that tutors did not have the opportunity to have face-to-face classes with students and as such had to devise new approaches to teaching. In connection to the theory, it can be said that the online or remote teaching and learning would be efficient if tutors are able to manage the three variables, structure, dialogue and learner autonomy, more effectively.

### **COVID-19 Pandemic in Ghana**

COVID-19 pandemic was officially confirmed in Ghana on the 12<sup>th</sup> March, 2020. At an emergency press conference on the 12<sup>th</sup> of March, 2020, Health Minister Kwaku Agyemang-Manu announced Ghana's first two confirmed cases. These were recorded in Accra and they were individuals returning from Norway and Turkey (Duncan, 2020a; Duncan, 2020b). The first recorded case led to the beginning of contact tracing.

After the first cases were recorded, the Government of Ghana engaged in major stakeholder meetings and training workshops for health professionals and those in services deemed essential on how to manage the COVID-19 disease. Aside this, the President of the Republic



of Ghana addressed the country on 15<sup>th</sup> March, 2020 and outlined included bans on school activities, bans on all social gatherings, and a temporary or partial lockdown and restrictions of the movements of people in the Greater Accra and Ashanti Regions of Ghana (Acheampong, 2020). The partial lockdown took effect on the 30<sup>th</sup> of March, 2020 and lasted for a period of two weeks.

In response to the pandemic, guidelines on case management of covid-19, antigen testing, and emergency preparedness and response developed by the Ministry of Health (MoH) with support from the Ghana Health Service and the World Health Organization have guided the prevention, control and management of the infection in Ghana (Ministry of Health, 2020a; Ministry of Health, 2020b, Ministry of Health, 2021). All of the guidelines to ensure that the spread of COVID-19 is minimised continues to remain in place as at the time of this study.

### **Impact of COVID-19 on Students' Academic Performance**

With the COVID-19 pandemic, the challenges for the education system have become worse. The World Bank Education Global Practice (2020) observed that while the world was already going through a learning crisis with the COVID-19 pandemic, more than 160 countries had closed schools, affecting about 1.6 billion children and out-of-school youth. The World Bank report showed that the COVID-19-induced education crisis may cause not only loss in learning, but also a long-term loss of human capital.

Since the COVID-19 pandemic, there have been some studies on the impact of COVID-19 on the academic performance of students. For instance, Gonzalez et al. (2020) examined the influence of the COVID-19 confinement on the autonomous learning performance of students in higher education, with a special focus on the Universidad Autónoma de Madrid. The researchers put 458 students into two groups: the control group, and the experiment group. Students in the experiment group were those who took online classes as a consequence of the confinement. From their study, they found that confinement had a significant positive influence on the academic performance of students. Their study habits were improved. The study of Gonzalez et al. give the indication online learning improved academic performance of students.

Adnan and Anwar (2020) investigated the attitudes of college students in Pakistan towards online classes during the COVID-19 pandemic. Their study of both undergraduate and postgraduate students showed that online classes could not produce desired academic performance, since most students were unable to access the internet. Adnan and Anwar found also that students faced challenges like absence of traditional classroom socialization and lack of face-to-face interaction with the instructor. The results of Adnan and Anwar show that COVID-19 has had negative effect on academic performance of students. This was contradictory to the study of Gonzalez et al. (2020). The difference could be because Gonzalez et al.'s study was experimental while that of Adnan and Anwar was a self-reported descriptive survey.

Further, Duraku and Hoxha (2020) argued that the closure of educational institutions due to preventive measures against the spread of COVID-19 affected the education, well-being, and functioning of all parties involved and benefiting from educational systems in the world. Aucejo, French, Araya and Zafar (2020) examined the impact of the COVID-19 pandemic on higher education. The researchers sampled 1,500 students at one of the largest public institutions in the United States using an instrument designed to recover the causal impact of the pandemic on students' current and expected outcomes. The results showed large negative

effects across many dimensions. Specifically, due to COVID-19: 13% of students had delayed graduation, 40% lost a job, internship, or a job offer, and 29% expected to earn less at age 35. Also, it was found that one quarter of students increased their study time by more than 4 hours per week due to COVID-19, while another quarter decreased their study time by more than 5 hours per week. Generally, it was clear that COVID-19 affected the education of students negatively.

In addition, Mahdy (2020) conducted a cross-sectional study to examine the impact of COVID-19 lockdown on the academic performance of veterinary medical students and researchers. Online survey was conducted with 1,392 participants from 92 different countries with a response rate of 94.1%. The results revealed that COVID-19 pandemic lockdown affected the academic performance of most participants with varying degrees. Although online education provided an opportunity for self-study, the main challenge that online education faced in veterinary medical science was how to give practical lessons. Also, students thought that it was difficult to fulfill the veterinary competencies only with online education system. From the study of Mahdy, therefore, it is clear that COVID-19 affected education negatively.

Hashemi (2021) investigated the effects of COVID-19 on the academic performance of Afghan students and their level of satisfaction with online teaching. In the conduct of the study, the researcher surveyed 1231 respondents, including 867 males and 364 females, from public and private universities of Afghanistan. Data were analysed using both descriptive and inferential statistics. The results showed that COVID-19 had negatively affected the academic performance of Afghan students. Also, the students were highly dissatisfied with online teaching during this critical moment.

In a similar vein, Hammerstein, König, Dreisörner and Frey (2021) provided a systematic overview of evidence-based studies on the effects of COVID-19-related school closures on student achievement. The results indicated that there was a negative effect of school closures on student achievement. This was more particular for younger students and students from families with low socioeconomic status.

Rahayu, Rahmadani, Syafitri, Prasetyoningsih, Ubaidillah and Tavakoli (2022) examined the experiences of teachers in Indonesia regarding their use of technology in teaching during the COVID-19 pandemic. The study was qualitative in nature and data were collected using semi-structured interview. The results showed that that learning was mainly dependent on the internet connection as many teachers suddenly lose their connection when they are teaching. The teachers complained of lost internet connections with students too.

The study of Rahayu et al. (2022) in Indonesia was similar to that of Khobragade, Soe, Khobragade and Abas (2021). Khobragade et al. sought to find out the barriers in virtual learning among medical students. The study was cross-sectional and data were collected from 160 students. The results revealed that low motivation, communication, internet connectivity, and technical problems were the main barriers to online learning.

The few studies reviewed have shown that the COVID-19 pandemic affected academic work of students negatively. Only the study of Gonzalez et al., which was an experimental study, found online learning which replaced regular academic work in the era of the COVID-10 pandemic to be beneficial to students. Another observation made from the studies reviewed is that there was a dearth of literature on how COVID-19 affected academic work in Ghana and sub-Saharan Africa.

## Research Gaps

After the review of literature, a major conceptual gap identified is that since the COVID-19 pandemic is a new and has not been in existence for long, most previous studies have focused on how the nature of academic work has changed due to the pandemic. The actual impact of the pandemic on academic performance has not gained much research attention. The current study would bridge this gap.

Contextually, a gap identified in the literature is that most of the literature reviewed were foreign. There were not studies similar to the current study at the time of the study in the Ghanaian context. Even studies of this nature in the African context were rare.

In terms of methodological gaps, most of the studies reviewed adopted quantitative cross-sectional and experimental approaches but then most of them were focused on students in universities. Even though the current study adopts descriptive survey design and a quantitative approach in data collection and analysis, the participants in the study are from Colleges of Education. Thus, all the participants in the current study were been trained to be teachers. In this sense, the current study bridges the methodological gap by focusing on a group which have not been the focus of similar studies.

## METHODOLOGY

Descriptive survey design was used for this study. In this design, the researcher focuses on the relationships that exist, the practices that are prevalent, the issues that are occurring and the effects or trends that are developing in relation to a specific phenomenon (Best & Kahn, 2009). In this regard, the choice to use descriptive survey design was appropriate because it helped to accurately describe how the COVID-19 pandemic affected academic performance of students.

Regarding the population for the study, the study covered students in three selected Colleges of Education in the Volta Region of Ghana. To ensure anonymity, the actual names of the colleges are not made known. A sample of 346 students was selected from a population of 3,500 students. This was based on Krejcie and Morgan's (1970) sample determination table. Convenience sampling procedure was used in this study. Convenience sampling involves sampling individuals who are available and willing to participate in the study. This sampling approach was considered appropriate because at the time of the study, students were studying remotely out of campus and so there was no possibility of gathering all of them at a specific location for data collection. In using convenience sampling, the online questionnaire for data collection was sent out to students in the selected colleges and those were available and willing completed the questionnaire.

The students were given a period of two working weeks to complete the questionnaire. At the end of the two weeks only 270 students fully completed the questionnaires. Since the expected sample size was 346, the return rate was calculated to be 78%. The main reason for this return rate was due to poor internet connectivity at their respective residences. The data obtained were analysed using means and standard deviations. The results are presented in tables showing the mean scores and standard deviations.

## RESULTS

### Perceived Impact of COVID-19 on Students' Academic Performance

The study sought to find out the perceived impact of COVID-19 on students' academic performance. The respondents were required to indicate their agreement or disagreement with



some statements regarding their academic performance. The data were analysed using mean and standard deviation. Mean scores of 3.0 and above were deemed to be high and indicative that the respondents mostly agreed with the specific statement while mean scores below 3.0 imply that the respondents disagreed with the statement. The results are presented in Table 1.

**Table 1: Perceived Impact of COVID-19 on Academic Performance of Students**

Statement	Mean	Std. Dev.
It is more difficult for me to focus during online teaching in comparison to on-site teaching.	3.65	0.98
My performance as a student has improved since on-site classes were cancelled.	2.35	0.83
My performance as a student has worsen since on-site classes were cancelled.	3.18	1.01
I have adapted well to the new teaching and learning experience.	2.78	0.89
I can master the skills taught in class this year even though on-site classes were cancelled.	2.65	1.04
I can figure out how to do the most difficult classwork since on-site classes were cancelled.	2.61	0.99

It is shown in Table 1 that the respondents were in agreement that it was more difficult for them to focus during online teaching ( $M=3.65$ ,  $SD=0.98$ ). This means that in comparison with face-to-face teaching, students struggled to focus during online lessons. Also, it was shown in Table 1 that the respondents agreed that their academic performance had been worse since on-site classes were cancelled in favour of online classes ( $M=3.18$ ,  $SD=1.01$ ). Thus, the students were of the view that online classes had affected their academic performance negatively. Aside the two statements which recorded mean scores above 3.0, the rest of the statements had mean scores below 3.0. This means that for those statements, the respondents mostly disagreed.

For instance, the respondents did not support the views that they had adapted well to the new teaching and learning experience ( $M=2.78$ ,  $SD=0.89$ ), that they could master skills taught online ( $M=2.65$ ,  $SD=1.04$ ), and that they could figure out how to do the most difficult classwork online ( $M=2.61$ ,  $SD=0.99$ ). The results from Table 1 clearly indicate that the academic performance of students in the COVID-19 era was affected negatively because teaching and learning had to be switched from face-to-face on-site classes to online classes.

### **Main Challenges Encountered by Students during the COVID-19 pandemic**

Another aim of the study was to examine the main challenges encountered by students during the COVID-19 pandemic. The respondents were required to indicate their agreement or disagreement with some statements about their challenges. The data were analysed using mean and standard deviation. Mean scores of 3.0 and above were deemed to be high and indicative that the respondents mostly agreed to the specific statement while mean scores below 3.0 imply that the respondents disagreed with the statement. The results are shown in Table 2.

**Table 2: Challenges Encountered by Students during the COVID-19 Pandemic**

<b>Statement</b>	<b>Mean</b>	<b>Std. Dev.</b>
There is psychological trauma involved in studying when there is fear of contracting COVID-19	3.16	0.88
Poor internet connectivity affects online learning system	4.51	0.97
Lack of the needed resources like laptops to be able to access online learning system	4.45	0.88
Lack of conducive atmosphere in the house to study	4.12	0.65
Difficulty in studying abstract concepts on your own	3.04	0.98

Table 2 shows that the students encountered several challenges during the COVID-19 Pandemic. From the results, it can be seen that poor internet connectivity ( $M=4.51$ ,  $SD=0.97$ ), lack of needed resources like laptops to access online learning system ( $M=4.45$ ,  $SD=0.88$ ) and lack of conducive learning atmosphere in the house ( $M=4.12$ ,  $SD=0.65$ ) were the main challenges which affected students during the COVID-19 pandemic.

There was also the issue of psychological trauma caused by the fear of contracting COVID-19 ( $M=3.16$ ,  $SD=0.88$ ) and the difficulty in studying abstract concepts individually ( $M=3.04$ ,  $SD=0.98$ ). All of these challenges affected the academic work of students during the COVID-19 pandemic.

### **Discussion**

The results have shown that it was more difficult for the respondents to focus during online teaching when compared to face-to-face teaching. This could therefore explain why the respondents indicated that their academic performance had been worse since on-site classes were cancelled in favour of online classes. In essence, the students were of the view that online classes had affected their academic performance negatively. For most students and tutors in Ghana, the COVID-19 pandemic presented an unfamiliar territory in terms of the means of learning. This made students unable to study and perform as expected.

The findings support the findings of Adnan and Anwar (2020) that COVID-19 has had negative effect on academic performance of students in Pakistan. Similarly, Hashemi (2021) revealed that COVID-19 had negatively affected the academic performance of Afghan students. Also, the students were highly dissatisfied with online teaching during this critical moment. In the study of Hammerstein et al. (2021) provided a systematic overview of evidence-based studies on the effects of COVID-19-related school closures on student achievement. The results indicated that there was a negative effect of school closures on student achievement. From the results of the studies mentioned and those of the current study, it appears evidently clear that COVID-19 affected students' academic performance negatively.

In terms of the challenges encountered by students during the COVID-19 Pandemic, the study revealed that poor internet connectivity, lack of needed resources like laptops to access online learning system and lack of conducive learning atmosphere in the house were the main challenges which affected students during the COVID-19 pandemic. There was also the issue of psychological trauma caused by the fear of contracting COVID-19 and the difficulty in studying abstract concepts individually. All of these challenges affected the academic work of students during the COVID-19 pandemic. The results support the results of Adnan and Anwar (2020) that students faced challenges like absence of traditional classroom socialization and lack of face-to-face interaction with the instructor. Similarly, Mahdy (2020) revealed that the

main challenge that online education faced in veterinary medical science was how to learn practical lessons. Also, in most countries, internet connectivity is problematic and this affected teaching and learning using online means during the COVID-19 pandemic (Rahayu, Rahmadani, Syafitri, Prasetyoningsih, Ubaidillah & Tavakoli, 2022). Khobragade, Soe, Khobragade and Abas (2021) supported this view when they found that the barriers in virtual learning among medical students included communication, internet connectivity, and technical problems.

### **Conclusions**

The COVID-19 Pandemic at its peak has been detrimental to the academic performance of students in Colleges of Education in Ghana. Specifically, the adoption of online learning to replace face-to-face classes did not favour most students. The students struggled to concentrate on academic work because of the challenges of online learning and this affected their academic performance negatively. In Ghana, where internet connectivity is a major challenge, the conclusion in this study was not surprising.

### **Recommendations**

On the basis of the findings of the study, it is recommended that Colleges of Education should provide platforms for online learning with easy access and usage for students. Also, Colleges of Education should collaborate with non-governmental agencies to provide students with electronic devices that they can use to easily access the internet. In addition, Colleges of Education should provide internet packages for students while at the same time training students on how to effectively utilise online resources for their academic work.

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