



An Exploratory Study on the COVID-19 E-learning on Students Academic Performance: The Case of the University of Ghana Business School

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ABSTRACT

The unruly consequences of the COVID-19 outbreak have hamstrung higher education institutions. It also highlighted the importance of digital learning and its influence on student's academic performance. This study aims to investigate the influence of students' socio-demographics and their parents' socioeconomic characteristics on their academic performance during the implementation of the COVID-19 lockdowns using a qualitative approach. In-depth semi-structured interviews with 30 purposively chosen informants were used. The results indicated that the COVID-19 pandemic has influenced student learning process and academic performance. It revealed that their sociodemographic characteristics and their parent's socioeconomic status affected their academic achievements during the COVID-19 outbreak. Students have faced numerous challenges during the implementation of the COVID-19 lockdowns, which influenced their academic performance. Higher education institutions must purchase licensed e-learning tools and provide students and professors with digital skills training in order to enhance their teaching, learning, and academic performance.

Keywords: Higher education; Academic performance; Face to face learning; Online learning; Student experience

INTRODUCTION

The unruly consequences of the COVID-19 outbreak have obstructed various sectors of society, including higher education institutions. In addition, some evidence was highlighted as a real picture of the COVID-19 outbreak's influence on student's academic performance and university enrolment. A report by the American council of education

indicated that university enrollment is likely to drop by 15% in 2020, while many students and institutions would be confronted with significant tuition cutbacks, academic performance hurdles, and complexities due to online virtual classes. Additionally Owusu-Fordjour, et al. indicated how most governments chose to put schools on lockdown to minimise the spread of COVID-19, resulting in about 370 million children being absent from learning institutions. In the

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same vein, United Nations Educational, Scientific and Cultural Organization (UNESCO)'s report indicated that 90% of world students are influenced by the COVID-19 outbreak and school lockdowns. Along the same line, the commonness of indefinite environment, financial constraints, health shocks, and transition to virtual learning progressively affected students' academic performance. Likewise, Harris has found that many working parents during the COVID-19 outbreak and lockdowns were struggling to educate and finance their respective wards, which negatively influenced their academic achievement. The pandemic has altered the global landscape of higher education, with institutions responding by attempting to maintain in class teaching with social distancing, designing hybrid models or blended learning, or transitioning to online instruction. Regardless, evidence has shown mixed assumptions on the influence of COVID-19 on online learning and students' academic performance. For instance, highlighted that the COVID-19 pandemic has significantly improved face to face and online learning academic performance. Meanwhile Aucejo, et al. emphasized that it confronts students with financial constraints and health concerns. Moreover, the transition to the online learning system could influence students' academic achievements. Various scholars also argued that the teaching module offered during the COVID-19 pandemic was referred to as electronic learning to solve the learning crises. Nonetheless, a new concept has surfaced, which is called emergency remote teaching. In Ghana, where face to face learning is the predominant teaching modality across universities, the government's total lockdown that aims to mitigate virus spread forced all face to face classes in universities to move to online learning. Such action required a change of teaching modalities to adapt to online instruction. In sub-Saharan Africa, studies on the COVID-19 outbreak mainly focus on its economic and health implication, learning experience, poverty, and employment. Most COVID-19 studies in Ghana focus on second cycle institutions, primary education, and medical, with little attention paid to the socioeconomic and sociodemographic implication of the lockdowns, specifically on social science students. Ghana offers a distinct context to understand critical issues on the influence of COVID-19 on the performance of students and higher university education as a whole. Ghana's educational system has faced challenges, including curriculum changes that have resulted in challenges in instructional materials, vehement student demonstrations, and school closures due to the COVID-19 pandemic. Congruently, higher education institutions in Ghana have been hit by the COVID-19 outbreak and its related restrictions, which influenced students academic curriculum and performance. However, there is little or no exploratory study on how COVID-19 affects students academic performance in the social science field. There is a dearth of studies exploring deep issues of the COVID-19 pandemic and students academic performance in emerging economies like Ghana. Nevertheless, apart from the studies mentioned above, there is little or no empirical research on COVID-19 and its effects on higher education institutions in Ghana. This paper then seeks to explore the socioeconomic and demographic role of COVID-19 on students' academic

performance in Ghana, taking the university of Ghana business school as a case study [1-5].

The study seeks to accomplish the following:

- How do students perceive the paradigm shift in their learning experience before and after the COVID-19?
- What role did the COVID-19 play in students academic learning outcomes?
- What are students perspectives on the influence of their sociodemographic characteristics on their academic performance during the COVID-19 instruction?
- What are the perceptions of students regarding the relation between parental socioeconomic characteristics and their academic performance?
- What are the reflections of students on various challenges they encountered during the COVID-19 online learning?

LITERATURE REVIEW

Kuhfeld, et al. revealed that missing school for a prolonged period due to the COVID-19 outbreak is likely to influence students' academic achievement positively. They asserted that it would take students probably two full years to compensate for such a loss of educational time and stressed the need for a long-term recovery effort. Even though their study found that students are more likely to return with more critical academic skills and performance variability, one of its major limitations is that it did not project the role of COVID-19 differently based on race. Correspondingly, Owusu-Fordjour, et al. found how ineffective the online learning system is due to students inability to study effectively at home. They also emphasized how parents could not assist their children in accessing online platforms and supervising their studies at home without any complications. Moreover, limited Internet access and a lack of technical knowledge about e-learning platforms hampered students' academic. In fact, the COVID-19 outbreak has negatively influenced students' academic achievement because of their inability to learn by themselves without teachers' assistance. Although this study's findings will go a long way toward assisting policymakers in developing long term policies to address such challenges, the sample size is too small to be generalized [6-8].

Congruently, the UNESCO report indicated that about 89% of students in sub-Saharan Africa lack access to home computers, while 82% do not have Internet access. Even though the e-learning platform cannot accommodate all students at the same time due to poor internet connectivity, which affects the academic performance of those who do not have internet access, the literature did not investigate student performance differences across courses and how individual characteristics influence student academic achievement during the COVID-19 pandemic. Moreover, Henaku found that online learning, connectivity problem, cost of internet bundle, challenges with the device, household production, and overall perception of e-learning influence students overall academic achievement at educational institutions in Ghana. Although the findings have concluded that Internet connectivity issues,

financial difficulties due to the high cost of Internet bundles, and device disruption, negatively influence student academic performance, the study's sample size of 10 participants was insufficient to generalize [9-11].

During the COVID-19 outbreak, Lederer, et al. have discovered that college students in the United States face increasing housing and food insecurity, financial hardships, lack of social connectedness and a sense of belonging, uncertainty about the future, and access issues that impede their academic performance and well-being. However, the study did not explain how COVID-19 exacerbates the inequalities that are already existing for students of color and in low income households. Consistently Bono, et al. also found that the COVID-19 outbreak caused depression, which influenced students' well-being and influenced their academic achievement. However, the same study has failed to address racial and socioeconomic status gaps. According to Rwigema, disruptions in learning, decreased access to education and research facilities, lack of digital skills, insufficient infrastructure, poor network connectivity, power outages, inaccessibility, and unavailability have hampered students' academic performance in Rwanda during the COVID-19 outbreak. Even though the pandemic has had a debilitating effect on academic achievement, the lockdowns have provided students with a unique opportunity to effectively use their available time to acquire new skills using digital platforms. However, the study ignores the class size and mode of course delivery and how they influenced students' academic achievement. Furthermore, El-Said posited that the unplanned and rapid transition from face to face to online learning did not result in a poor learning experience as expected. According to Tamrat, the pandemic has significantly influenced academic achievement, business operations, and higher education institutions in Ethiopia by reducing their revenue sources, decreasing their employee productivity, and limiting their institutional capacity to cover critical costs such as salaries and rents [12-15].

During the COVID-19 pandemic, parents socioeconomic power declined, making it difficult for them to provide the necessary accessories, infrastructure, digital skills, and Internet connectivity to improve their ward's academic performance. However, the study has failed to emphasize close monitoring and supervision as a mechanism for mitigating the role of the lockdowns on student academic performance. Other scholars argue that economic stress, financial constraints, unemployment, psychological implications, and fear of being infected by the virus will reduce university education students' academic performance. Numerous studies have shown how specific sociodemographic characteristics of students, such as age, gender, marital status, level of education, level or year at school, life orientation, and socioeconomic status, have influenced their academic achievements during the COVID-19 pandemic. These studies have ignored the importance of organizational factors in ensuring successful online teaching implementation and improving students academic performance. Literature on COVID-19 also shows that

university lockdowns will lead to low academic achievement [16].

According to studies, the COVID-19 shutdown reduced the academic achievement of students enrolled in mathematics or science courses more than those who are enrolled in reading courses. Furthermore, students from low income families will not outperform those from middle or upper income families in reading. This is because many low income students do not have access to enough devices in order to obtain online materials and virtual instructions. Despite their insightful conclusions, these studies fail to investigate how nutritional or dietary factors influence student's academic achievement and ignore the fact that some were already performing poorly prior to the COVID-19 outbreak. Nonetheless, educational researchers have studied the disparities in student achievement between face to face and online learning. Their results vary greatly depending on the type of analysis and study sample. The results of a single and multiple course review, for example, may provide intriguing but anecdotal evidence of these variations due to different extraneous variables. According to evidence, academic performance is higher in face to face learning than in online learning. Meanwhile, other researchers claim that online learning improves students academic performance more than face to face instruction. The differences in outcomes can be attributed to several variables that differ from one study to the next. Due to time management and perseverance in an online learning context, self-regulatory and adaptive students perform academically better than face-to-face students during the COVID-19 era [17].

Methodology and Data Collection

The study's primary aim was to explore the role of COVID-19 on the academic performance of university students. It examined gender views on the extent to which COVID-19 has influenced students academic achievement. Hence, opinions were solicited from level 300 undergraduate students of the University of Ghana Business School (UGBS)'s main campus. The study chose such students because they had both face to face and online learning experiences during the lockdowns and were thus best suited to answer the research questions. The key questions that were posed include (i) Students perception of the paradigm shift in their learning experience before and after the COVID-19, (ii) The role COVID-19 play in students academic learning outcomes, (iii) Students perspectives on the influence of their sociodemographic characteristics on their academic performance during the COVID-19 instruction, (iv) Perceptions of students regarding the relation between parental socioeconomic characteristics and their academic performance, and (v) The reflections of students on various challenges they encountered during the COVID-19 online learning. Through the study, the researcher would be able to establish how students sociodemographic characteristics and their parents socioeconomic factors can help them achieve higher academic performance during their virtual learning experience [18].

Interviews were purposively conducted with all student-participants in order to better understand the influence of the COVID-19 outbreak on their academic performance. The sampled participants who had experienced online learning were purposively selected from all the departments in UGBS, namely: Accounting, finance, Marketing and Entrepreneurship (M and E), Operations and Management Information Systems (OMIS), Organization and Human Resource Management (OHRM), and Public Administration and Health Services Management (PAHSM). In total, 30 out of 36 individual participants who were selected have agreed to participate in the collection exercises that were held between October 2021 and January 2022. Despite the refusal of some students to participate in the study, it is significant to admit that including more students from the UGBS would not have substantially changed the study findings. However, said findings cannot be generalized to all UGBS undergraduate students. Instead, they offer an investigative value by demonstrating the extent to which COVID-19 has played a role in student academic performance. Six accounting, finance, M and E, OMIS, OHRM, and PAHSM students make up the sample. Of the 30 interviews conducted, 17 were with men, while the rest were with women. Students over the age of 20 were more common in the sample than those between the ages of 18 and 20, accounting for 23 of the 30 interviewees. The 30 interviewees were interrogated at the UGBS main campus in Accra [19].

Furthermore, the study would highlight the prospects of promoting high academic achievement and quality education during the COVID-19 pandemic. The interview guide was designed based on some of the reviews done and content validity was ensured through peer debriefing and modifications made by an expert qualitative researcher. The interview guide which aims to solicit the requisite information from the students was pre tested to reflect the study objectives for quality assurance purposes and contains the relevant sociodemographic. It focused on the main keywords; (i) Students perception of the paradigm shift in their learning experience before and after the COVID-19, (ii) The role COVID-19 play in students academic learning outcomes, (iii) Students perspectives on the influence of their sociodemographic characteristics on their academic performance during the COVID-19 instruction, (iv) Perceptions of students regarding the relation between parental socioeconomic characteristics and their academic performance, and (v) The reflections of students on various challenges they encountered during the COVID-19 online learning. An introductory letter explaining the aims of the research and requesting consent to participate in the study was sent to the randomly selected students. After obtaining the consent of the study participants, the researcher scheduled an appointment with each of them to conduct the interview and all interviews were held in English. In addition to the one-on-one in depth interviews, secondary data articles and research reports on the COVID-19 pandemic related to higher university education were thoroughly reviewed and examined [20].

Data collected, field notes, observations and informal discussions were transcribed in a word file in order to gain an

in-depth understanding of how sociodemographic and socioeconomic factors of COVID-19 lockdowns have influenced students academic performance. Interviews and field notes based on informal discussions captured students views on the role of the pandemic shutdown on their academic performance. Thematic analysis was then carried out using the vivo 11.0 software, allowing systematic coding and development of themes. The themes were deductively derived from the key research questions but inductively from the qualitative data, which were organized and analyzed thematically using data from interviews and secondary sources. Analytical and thematic headings were generated based on the research questions. Because the research involves human subjects, it was conducted in accordance with the research ethics code. It ensured that the necessary informed consent was obtained for human subjects participants and that their privacy was respected. The researcher used pseudonyms for each participant to ensure anonymity and confidentiality. Furthermore, participant information was safeguarded against unauthorized third party access.

RESULTS

The study identifies four primary themes based on the research objectives during the analysis stage. They include students' perception of the paradigm shift in their learning experience before and after the COVID-19, the role COVID-19 play in students academic learning outcomes, students perspectives on the influence of their sociodemographic characteristics on their academic performance during the COVID-19 instruction, perceptions of students regarding the relation between parental socioeconomic characteristics and their academic performance, and the reflections of students on various challenges they encountered during the COVID-19 online learning.

Paradigm shift in their learning experience before and after the COVID-19: When asked to compare their learning rates in face to face versus online classes, the majority of participants agreed that there were substantial differences. They expressed a lack of zest and motivation to study or meet deadlines, low self-discipline, lack of understanding of courses because they were usually rushed through, lack of classmates interaction, and little to no group learning. An interview made the following statement: Online learning was ineffective because the teaching was unsatisfactory, and knowledge and understanding were lacking due to the absence of concentration. I did not broaden my scope on the subject area because there was no pressure from the faculty, and I submitted my assignments and projects late, which affected my academic results.

Another participant observed: I find onsite lectures more innovative and interactive than online learning, where there was poor classroom socialization, and a lack of face to face interaction. All of these hampered my academic performance. An OMIS student shared how learning was better during the face to face than online classes: I understood courses better during face to face learning than online learning because of

the ability to form study groups to facilitate discussions. Before the lockdown and online learning, I was within the first class division.

Role COVID-19 played in the academic performance of students: The study aims to explore how COVID-19 influenced students academic performance. All the interviewees agreed that it has influenced their academic performance to varying degrees. This has emerged from the findings that the lockdowns have affected students knowledge based on the field of study, quality of learning, loads of class assignments, class projects and learning performance. Some students made the following observation.

Yes, I experienced abysmal academic performance because I did not receive any support from both faculty and colleagues. I also had little knowledge of using digital learning.

When asked if class size affected students academic performance, it was discovered that it played a role in students academic performance. The study's findings revealed that students performed worse in required courses (with larger class sizes) than in elective courses (with smaller classes). The findings also show that students performed better academically when they received face-to-face instructions rather than online ones. A participant has observed.

I didn't do well in the UGBS required courses, but my results in the electives were better because we were a smaller group, so I could ask the lecturers questions, whereas in the required courses, the number was larger, and not everyone had the opportunity to ask questions for further clarification.

According to the study's findings, interviewees fared much better in reading courses than in mathematical lectures delivered online during the COVID-19 shutdown. The findings further indicate a better student academic performance in both reading and mathematics courses that were delivered during face to face learning. Some interviewees have noted.

It didn't help because not everyone uses smartphones and laptops during online learning. As a finance student, I had to learn how to use Sakai to type mathematical equations during an assignment, which was a challenge and caused my GPA to drop from 3.6 to 3.52.

However, some students experienced a positive influence of COVID-19 and online lessons on their academic performance. One of the PAHSM students has made an interesting statement on how online learning has improved his independent learning skills and academic performance:

Yes, the lockdown positively influenced my academic performance as a student by providing me with opportunities to learn digital skills and innovative pedagogies that were not available in face to face learning.

Role of student sociodemographic traits on their academic performance during the COVID-19 instruction: The study examines the role of students socio-demographics on their academic performance during the COVID-19 pandemic. The general opinion was that students' sociodemographic

characteristics (*i.e.*, age, gender, ethnicity, class size, course/ programme type, socio culture) have affected their academic performance during the lockdown. The field data showed a significant difference in academic performance between genders during the COVID-19 outbreak. Furthermore, due to patriarchal societal dominance, strong personalities, and cognitive abilities of men, the study has discovered that male students experienced higher satisfaction and performed better academically during lockdown than female students (who participate in extracurricular activities). The study found that students over the age of 20 are more likely to perform better than students between the ages of 18 and 20 during the shutdown due to their high self-regulatory capacity. According to the findings, the age of the participants had an influence on the amount of time they spent on online course teaching and learning activities. An interview revealed in this regard that:

Yes, as a teenager, I found it difficult to cope during the lockdown because of low cognitive abilities regarding digital learning, which reflected in my reasoning skills, distractability, and difficulty in sustaining attention in finance online classes.

Another participant elaborated on the role of gender in students academic performance during the pandemic shutdown: You see, as a young lady, society and culture demand that I assist my mother in the kitchen and perform certain house chores while my brothers either study or do class assignments. By the time I am done with all these numerous chores, I am exhausted and cannot concentrate on my online learning or complete class assignments.

Perceptions of students regarding the relation between parental socioeconomic characteristics and their academic performance: The study investigates the influence of socioeconomic factors on students academic performance during the COVID-19 era. The general consensus was that socioeconomic factors such as parent's income level, employment status, and level of education had a significant

negative influence on students' learning and academic performance during the lockdowns. Its findings indicate that students with parents of high socioeconomic status report strict learning enforcement, exceptional support and increased academic performance compared with a student of parents with average or low socioeconomic status during the pandemic shutdown. According to interviewees, there was no system structure solution to ensure equity and equality in opportunities for students from different socioeconomic backgrounds during the lockdowns. Interview has added that the socioeconomic profile of the university is also relevant to their academic performance, regardless of the socioeconomic status of their individual families. An interviewee noted: Yes, because my parents have a high socioeconomic status in terms of education, occupation, and income, they provided the necessary books, computer, study room, internet availability and connectivity, and access to extracurricular educational services. I also had a conducive home learning environment, which played a role on my academic performance during the lockdown. It was discovered that low income families did not participate and were less involved in

their children's school activities. Participants in the interviews also stated that they provided less exceptional support through discussions, appropriate resources, and learning conditions, which influenced their academic performance. An M and E student stated that: As a student from a low income family with a low social orientation toward education, my parents could not afford the high broadband data consumption, digital devices, and available study room that is furnished with relevant academic resources, which negatively hampered my academic performance.

Student's reflections on various challenges they encountered during the COVID-19 online learning: The COVID-19 pandemic has resulted in numerous challenges for students, negatively influencing their academic performance. The majority of interviewees emphasized that poor Internet connectivity, loss of interest, socioeconomic factors, high Internet costs, unavailability of learning devices, inaccessibility of online learning resources, less interaction, a sense of loneliness, human intrusion, procrastination, distraction, lack of digital competence, insufficient Internet bundle, and updated device availability are factors that have hindered their academic performance. A finance student had this to say about the subject. I experienced technical difficulties (lousy internet connectivity, outdated devices, poor classroom socialization and high data cost) in online learning during the COVID-19 lockdown. It negatively influenced my learning and academic performance as compared to the face to face learning semesters. Another interviewee stated how students' low socioeconomic backgrounds significantly affected their ability to effectively transition into online learning and purchase broadband Internet connectivity during the COVID-19 shutdown. I am from a low socioeconomic background and I found it difficult to transition smoothly from face-to-face to online learning due to financial constraints. I relied mainly on the university and school computers, and free Internet connectivity before the lockdowns.

Moreover, another participant agreed to the above statement, saying: Yes, I reside in a village in the northern part of Ghana with low digital learning skills, coupled with the unavailability of school facilities. Because I am from a poverty-driven home and couldn't afford the necessary educational resources, my academic record declined. When asked whether digital competence influenced students academic performance, most interviewees stated that they lacked the necessary digital competence, which hampered their academic achievement. Interview added that the lockdown forced students to access course materials through the digital library, which they lack the requisite competence to navigate.

A BSc finance student answered in affirmative: Yes, during the COVID-19 lockdown, I was not provided with the necessary digital and technical training, skills, knowledge, and attitudes for using digital devices to learn and complete assignments. I found it challenging to optimize the digital library because of my low digital competence.

A BSc human resource student observed how human intrusion was a challenge to effective learning during the COVID-19 pandemic: Yes, when I am learning, family members would be shouting or calling my name to attend to something, or pets would be barking, which affects my concentration during the online teaching and learning.

Another participant reiterated: Very poor because there's a lot of distraction from home, like poor network connectivity, a serene environment, and distraction from parents and television. It was challenging for me to cope because I learn best in group settings, and the lockdown has made that impossible.

An interviewee observed how the learning was rushed, stressful, lacking in quality teaching, and attended by lack of concentration and understanding, which affected her independent learning: On campus, I have study groups or learning partners and we study together or even explain what our lecturers taught us that we couldn't understand. I experienced difficulty learning independently as a result of the lockdown.

DISCUSSION

The COVID-19 pandemic has caught educational systems everywhere off guard, requiring higher education institutions to come up with potential methods overnight in the face of unplanned changes. The study found that the role of the COVID-19 shutdown was widespread and affected students academic role COVID-19 played in the academic performance of students all over the world. The lockdown has an ongoing, lengthy, and pervasive influence on students academic achievement. The findings of the UGBS case study have shed light on students perception of the paradigm shift in their learning experience before and after COVID-19, the role COVID-19 play in students academic learning outcomes, and students perspectives on the influence of their sociodemographic characteristics on their academic performance during the COVID-19 instruction. The results also illuminate students' perceptions regarding the relation between parental socioeconomic characteristics and their academic performance and students reflections on various challenges they encountered during the COVID-19 online learning. The research also placed students in their institutional settings in order to understand the influence of the COVID-19 lockdown on students academic performance in larger Ghanaian higher educational institutions. The perception of the paradigm shift in their learning experience before and after COVID-19, and the role COVID-19 play in students academic learning outcomes, is mixed to varying degrees. The study found that the COVID-19 shutdown had an influence on student academic success and achievement due to a loss of interest, unavailability and high cost of internet, unavailability of learning devices, inaccessibility of online learning resources, less interaction, and a sense of loneliness. This finding is supported by the work of Owusu-Fordjour, et al. and Tamrat. However, contrary El-Said's findings, the study also revealed a positive sentiment toward lockdowns which concern students digital skills and innovative pedagogies,

which enhanced their academic performance. This is affirmed by the study results contradict the findings of as there is no significant difference in the variation of passing grades between online and face to face learning. The findings also show that students performed better academically when they received face to face teaching rather than online instruction. One of the study's key findings is that the pandemic lockdowns had an influence on students independent learning rate due to personalities and digital amnesia. The study's findings corroborate the works of that students with strong self-regulation and e-learning skills could remain focused and committed to independent learning during lockdowns. It also revealed that learning was rushed, stressful, and lacked quality teaching and concentration, influencing students independent learning. In line with the works of Aristovnik, et al., the study revealed that students' socio-demographics such as age, ethnicity and socio-culture affected their academic performance during the COVID-19 pandemic. The investigation has unearthed that due to patriarchal societal dominance, strong personalities, and cognitive abilities of men, male students performed better academically during the lockdown than female students (who participate in extracurricular activities). The findings also revealed that students over the age of 20 are more likely than students between the ages of 18 and 20 to perform better during shutdowns due to their high self-regulatory capacity. The study shows that the age of the participants played a role in the amount of time they spent on online course teaching and learning activities.

The study pointed out that parent's income level, employment status, and level of education had a significant negative influence on students learning and academic performance during the shutdowns, corroborating the works of and Olaseni. Furthermore, students unanimously agreed that socioeconomic factors had an influence on their academic performance during the COVID-19 lockdowns, both positively and negatively. During the pandemic lockdowns, students with high socioeconomic status parents have reported strict learning enforcement, exceptional support, and higher academic performance than those with average or low socioeconomic status parents. In accordance with Tamrat's findings, the study discovered no system structure solution to ensure equity and equality in opportunities for students from various socioeconomic backgrounds during the pandemic. Moreover, the study emphasized that the socioeconomic profile of the university is also relevant to students' academic performance, regardless of their individual family's socioeconomic status. The influence of the COVID-19 pandemic on student academic performance caused them to perform abysmally worse during online learning than face to face learning, even though the difference is insignificant. The study's findings revealed that students fared much better in reading courses than in mathematical lectures that were delivered online during the COVID-19 outbreak. Despite this, the findings show no significant difference in student academic performance between reading and mathematics courses when taught face to face.

The study's findings disclosed student's reflections on the numerous challenges that negatively influence their academic performance, including poor internet connectivity, socioeconomic factors, human intrusion, procrastination, and distraction, dearth of digital competence, insufficient internet bundle, and updated device availability. The findings, however, have limitations and cannot be generalized to other Ghanaian public higher educational institutions.

CONCLUSION

This study aimed to investigate the influence of the COVID-19 pandemic on student's academic performance in a Ghanaian higher education institution. It also explores how sociodemographic and socioeconomic factors, independent learning rate, and challenges influenced students academic performance during the pandemic lockdowns. The findings presented here appear to be consistent with the results of similar studies, revealing that COVID-19 has influenced student academic performance to varying degrees. The COVID-19 shutdown has also significantly affected student academic success and achievement and should not be taken lightly. Moreover, parent's income, employment status, and education level played a role in students learning and academic performance during the COVID-19 shutdown. Several challenges that negatively affect student academic performance have been disclosed in this study and should not be taken for granted. In order to mitigate the challenges that each brings and satisfy the general student population, higher education institutions may consider a balance of online and face to face learning. They must purchase licensed e-learning tools and provide students and professors alike with digital skills training. Lecturers should be provided assistance in developing interactive online learning and materials for higher education institutions. Developing and maintaining robust communication techniques with management, staff, faculty, and students are critical to keeping all entities informed and updated on the next steps in the transition and ongoing training support. The study findings are limited to the University of Ghana Business School and cannot be generalized to all higher education institutions. Future research can be conducted among students in other universities using quantitative methods.

DECLARATIONS COMPETING INTERESTS

The author declares that he has no competing interests with respect to the research.

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REFERENCES

1. Aborode A, Anifowoshe O, Ayodele TI, Iretiayo AR, David OO (2020) Impact of COVID-19 on education in sub-Saharan Africa. *Gen Human*. 8:38-57.
2. Aguilera Hermida AP, Quiroga Garza A, Gomez Mendoza S, Del Rio Villanueva CA, Avolio Alecchi B, Avci D (2021) Comparison of students use and acceptance of emergency online learning due to COVID-19 in the USA, Mexico, Peru, and Turkey. *Educ Inf Technol (Dordr)*. 26(6):6823-6845.
3. Ahn J, McEachin A (2017) Student enrollment patterns and achievement in Ohio's online charter schools. *Educa Res*. 46(1):44-57.
4. Alexander KL, Entwisle DR, Olson LS (2004) Schools, achievement, and inequality: A seasonal perspective. *Educ Eval Policy Anal*. 23:171-191.
5. Aristovnik A, Kerzic D, Ravselj D, Tomazevic N, Umek L (2020) Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustain J*. 12:8438.
6. Aucejo EM, French J, Araya MPU, Zafar B (2020) The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *J Public Econ*. 191:104271.
7. Aucejo EM, Romano TF (2016) Assessing the effect of school days and absences on test score performance. *Econ Educ Rev*. 55:70-87.
8. Bono G, Reil K, Hescox J (2020) Stress and well-being in urban college students in the US during the COVID-19 pandemic: Can grit and gratitude help? *Int J Wellbeing*. 10(3):39-57.
9. Brand JE (2015) The far reaching impact of job loss and unemployment. *Annu Rev Sociol*. 41: 359-375.
10. Braun V, Clarke V (2006) Using thematic analysis in psychology. *Qual Res Psychol*. 3(2):77-101.
11. Brenan M. Over 8 in 10 parents now say child is learning remotely. Gallup.
12. Cavanaugh JK, Jacquemin SJ (2015) A large sample comparison of grade based student learning outcomes in online vs. face to face courses. *Online learning*. 19(2):1-8.
13. Coker M, Folayan MO, Michelow IC, Oladokun RE, Torbunde N, et al. (2020) Things must not fall apart: The ripple effects of the COVID-19 pandemic on children in sub-Saharan Africa. *Pediatr Res*. 89(5):1078-1086.
14. Danquah M, Schotte S, Sen K (2020) COVID-19 and Employment: Insights from the Sub-Saharan African Experience. *Indian J Labour Econ*. 63:23-30.
15. El Said GR (2021) How did the COVID-19 pandemic affect higher education learning experience? An empirical investigation of learners academic performance at a university in a developing country. *Adv Hum Comput Interact*. 21:1-10.
16. Elsalem L, Al-Azzam N, Jum'ah AA, Obeidat N, Sindiani AM, et al. (2020) Stress and behavioral changes with remote E-exams during the COVID-19 pandemic: A cross-sectional study among undergraduates of medical sciences. *Ann Med Surg (Lond)*. 60:271-279.
17. Gershenson S, Jacknowitz A, Brannegan A (2017) Are student absences worth the worry in US primary schools? *Educ Finance Policy*. 12(2):137-165.
18. Gonzalez T, de La Rubia MA, Hincz KP, Comas-Lopez M, Subirats L, et al. (2020) Influence of COVID-19 confinement on students' performance in higher education. *PloS one*. 15(10):0239490.
19. Harris LC (2020) Breaking lockdown during lockdown: A neutralization theory evaluation of misbehavior during the Covid-19 pandemic. *Deviant Behavior*. 1-15.
20. Henaku EA (2020) COVID-19 online learning experience of college students: The case of Ghana. *Int J Multidiscip Res Dev*. 1(2):54-62.