



# The Journey of University Students in the Digital Society during the Closure of Schools at the Peak of Covid-19

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## Abstract

Schools across the globe were shut down at the peak of the COVID-19 with the reason to contain the spread of the virus and that universities were not exceptional as students walked home without any proper strategic plans towards the educational journey as the future of the pandemic was unknown. Universities around the globe started to embrace the future by moving from real classroom teaching to a more digital classroom where students were taught by lecturers online. It was for that reason this study was conducted to evaluate university students' journey about the use of Learning Management System, Zoom and Google meet to navigate in the digital classroom during the closure of schools at the peak of COVID-19. The study used both primary and secondary data. A questionnaire was developed and administered to obtain the primary data. However, the study selected 10 public universities in Ghana and engaged 500 students as the research participants. Again, convenience and simple random sampling techniques were used to select universities and students respectively. It was confirmed by students that universities shifted from classroom teaching to virtual teaching and that this confirmation was substantiated by students to reveal that Learning Management System was greatly used to conduct virtual teaching that was followed by Zoom and lastly Google meet. In addition, it was found that some students were not digitally literate and this actuated difficulty to excel in the digital classroom created by the universities. It was recommended that universities should factor basic computing into the programme-based courses so that students could become digitally literate and fully prepared for the future.

**Keywords:** Journey; University Students; Digital Society; School Closure; COVID-19

## Introduction

COVID-19 is a deadly virus that was declared by the World Health Organization as a pandemic that was believed to have befallen the world on December 31, 2019 [1]. This pandemic negatively affected students, lecturers, and educational sectors in the world as schools and universities were closed down purposely to contain the widespread of the virus. The fortune of the universities was changed as they began to move from lecture theatre lecturing to a digital

classroom where students had digital contact with lecturers [2]. This new technological development was possible all in the name of digital society thus the world has been connected digitally. Digital society has offered several benefits in the world where different students get the same information online at the same point in time.

Significantly, the research conducted by Cervi, et al. [3] states that technological availability has propelled the universities to design great programmes with fresh

suggestions to support and enhance both teaching and learning. Jonas-Dwyer, et al. [4] also postulates that every new educational technology must be supported with adequate training mainly to accelerate teaching and learning results. Students of today do not make good use of technology in line with their academic lives unless educational sectors adapt to include technology in the instructional process to unearth the technological competencies of students [5].

Furthermore, the digital skills of students become upgraded as they use a different kinds of gadgets to study [6]. Therefore, university students nowadays have become users of information instead of makers of information particularly for academic ambitions [7]. Students often find it difficult to verify the originality of information as most of them need higher-order thinking skills to make effective teaching.

However, present-day universities have focused on academic know-how to develop students on the ways to determine the originality of information seen and taught as well as to gain technological prowess thus it has become possible because educational sectors have put in place plans to promote digital literacy [8].

In Ghana, the conditions of educational institutions during the closure of schools at the peak of COVID-19 were very alarming as students could not be met at classrooms and lecture theatres, this called for crisis learning to be done digitally [9]. Adding to this, Crawford, et al. [2] emphasize that the educational fraternity requires preparing students digitally for the future without underplaying academic values. Research works read so far are silent on the digital applications the universities used to conduct online teaching to students. To this end, there was an introduction of digital applications such as Zoom, Google meet, and Learning Management System (LMS) to support online teaching and learning while students were at home during the closure of schools at the zenith of the COVID-19.

Zoom is known to be an online-based software developed by Eric Yuan in 2013 used for teleconferencing, and conducting virtual education. However, Google Meet was developed by Lawrence Edward Page in the year 2017 for video conferencing [10]. In addition, Learning Management System (LMS) is web-based application software used to facilitate an instructional process that has a server and user [11]. These digital applications have taken their importance to the next level in the education fraternity at the time of the COVID-19 in Ghana. It is against this background that, the research aims to uncover the ways these digital applications impacted the university students as well as how they coped

with such applications to enhance online teaching and learning during the closure of schools at the peak of the COVID-19 in Ghana.

## Materials and Methods

The study used both primary and secondary sources of data. Due to the intensive impact of the COVID-19 on education, the research was limited to ten (10) public universities out of fifteen (15) public universities in Ghana to derive richer information for impressive data analysis. A convenience sampling technique was used to select the following ten (10) public universities as research settings;

1. University of Ghana (UG)
2. Kwame Nkrumah University of Science and Technology (KNUST)
3. University of Cape Coast (UCC)
4. University of Education Winneba (UEW)
5. University of Mines and Technology (UMAT)
6. University of Development Studies (UDS)
7. University of Professional Studies (UPSA)
8. University of Health and Allied Science (UHAS)
9. University of Energy and Natural Resources (UENR)
10. Ghana Institute of Management and Public Administration (GIMPA)

The convenience sampling technique was used based on the researcher's proximity to the research settings. A questionnaire was the main tool of the primary data collection for the study. A simple random sampling technique was also used to sort students from the selected ten (10) public universities. The simple random sampling technique was used to give students an equal opportunity to be selected. The study engaged 500 students from Level 200, 300, and postgraduate levels as research participants. Critical content analysis and statistical tabulation were materialized in the study. Digital applications such as Zoom, Google meet, and Learning Management System (LMS) became the major themes for the discussion of the study.

## Results

The findings of a study become an integral part of making meanings to a problem understudied. This section presents the field information of the study with the aid of statistical tabulation and textual descriptions to necessitate realistic understanding (Table 1).

Students Details	Category	Frequency	Percentage
Sex	Male	350	70.00%
	Female	150	30.00%
Level	200	230	46.00%
	300	200	40.00%
	Postgraduate	70	14.00%
University	GIMPA	18	3.60%
	KNUST	88	17.60%
	UEW	80	16.00%
	UDS	37	7.40%
	UCC	93	18.60%
	UENR	21	4.20%
	UG	98	19.60%
	UHAS	17	3.40%
	UMAT	32	6.40%
	UPSA	16	3.20%
Digital Application	Learning management system	330	66.00%
	Zoom	120	24.00%
	Google meet	50	10.00%

Source: **Fieldwork (2021)**

**Table 1:** Responses from the students.

According to the table above, 350 students were male represented by 70.0%. 150 students were female denoted by 30.0%. Again, it can be indicated that 230 students were in Level 200 represented by 46.0%. 200 students were in Level 300 denoted by 40.0%. 70 students were in the Postgraduate level represented by 14.0%. However, it can be viewed that 18 students represented by 3.6% were on the GIMPA campus. 88 students symbolized by 17.6% were from KNUST. 80 students denoted by 16.0% were at UEW. 37 UDS students from the Tamale campus represented by 7.4% were engaged in the study. 93 UCC students showed by 18.6% were involved. 21 UENR students denoted by 4.2% were used in the study. 98 UG students indicated by 19.6% participated in the research. 17 students represented by 3.4% were from UHAS. 32 UMAT students symbolized by 6.4% were involved. 16 students showed by 3.2% were at UPSA campus. Moreover, there were statistical data on Learning Management System, Zoom and Google meet which were used by universities to conduct online teaching and learning for students during the closure of schools at the peak of the COVID-19. It can be visualized that 330 students represented by 66.0% adapted to use Learning Management System during the zenith of the COVID-19. 120 students denoted by 24.0% used the zoom to study online. 50 students symbolized by 10.0% used Google meet to experience digital teaching.

## Discussion

Relevant and substantiated explanations were given to the results of the study. The discussions were done on the sex, level, and digital applications (Learning Management System, Zoom, and Google meet). However, the discussions of the results were supported by pieces of literature in the way of linking the findings of the past researches to the current results of the study mainly to make the research foundationally sound and this could make it functional in the field of study.

### Sex of the Students

Most of the male university students were eager to contribute completely to the study because unfavorable decisions from the university managements were unmanageable since not all students had access to the universities' websites about the progress of online learning. Even though female university students contributed but it was infinitesimal this is because females are naturally coward as they thought the outcome of the study could be used against them.

On a supportive basis, uncountable researches have been conducted to assess the effect of COVID-19 in the university

space. An empirical finding from the study masterminded by Santiago et al., 2020 describes learning under COVID-19 as “crisis learning” this comes in the way of the study that learning in the COVID-19 times during the closure of schools was impulsive as online teaching and learning became second to none. Both males and females expressed that the universities used the available technological resources to provide online teaching and learning. This is buttressed by the study done by Cervi, et al. [3] which discovers that large universities have dwelt on technological availability to bring onboard digital programs and new suggestions to improve and enhance both teaching and learning.

### Level of the Students

Half of the level 200 students engaged in the study were providing fervent information on the lack of basic ICT skills on their part and that, such inadequacies did not help them to feel comfortable for online learning but were somehow manageable as the universities were always conducting digital teaching. This confirms the study from Romero, et al. [5] which concludes that students of today do not make good use of technology in line with their academic lives unless educational sectors adapt to include technology in the instructional process to unearth the technological competencies of students. Level 300 students juxtaposed that online learning came with an online cost in terms of expenses involved in purchasing internet bundles; this problem seemed to be a financial constraint that existed among students. Thus, students were eager to participate in online learning but did not have money to bear the cost.

Few students substantiated the financial constraint by lamenting that it was doing them more harm than good since they did not also have the money to buy smartphones, tablets, and laptops that were the prerequisite tools for online learning. Postgraduate students contributed that poor internet connectivity became the major threat to the online learning initiated by the University managements. Students shared the view that the university communities had been around the clock to assist them digitally. This supports the research made by Crawford, et al. [2] which concludes that the educational sectors assisted digitally without underestimating academic values. All participants spoke goodies about the importance of online learning by describing it as the order of the day as COVID-19 had come to stay.

### Participating in Public Universities

The ten public universities were engaged in the study to solicit for students’ coherence on the online teaching and learning as COVID-19 arrived unplanned. Students from the

University of Ghana were many as they revealed that the university was established in 1948 hence it has numerous students as compared to other public universities. The University of Cape Coast had the second-largest among students who were involved in the study; students illustrated that the management of UCC had put measures in place to overcome COVID-19 in terms of academics as online teaching and learning had become frequent to fill the gap left by the virus. KNUST students were the third largest among the participating public university students; they indicated that university management had implemented online structures to bridge the gap between teaching and learning as created by the COVID-19 pandemic. UEW students became the fourth largest; they pleased the management to stick to the promise of doing online teaching and learning without undermining the quality of the academic year’s curriculum. This agrees with the research made by Crawford, et al. [2] which concludes that educational institutions have to support students without underplaying the academic values.

Students from the UDS-Tamale campus emerged as the fifth largest; they expressed that they had been enjoying the online teaching and learning but to some extent, few students among them technologically cannot authenticate the content hence such students became consumers of content instead of creators of content. This claim is supported by a study conducted by Gros, et al. [7] which states that students use technology as users of content instead of makers of content, particularly for academic goals. UMAT students occupied the sixth position as they uncovered that the university shifted from theatre teaching and learning to a more digital online study. This remains true as supported by the study made by Crawford, et al. [2] which lamplights that universities have swiftly changed from theatre lecturing to online lecturing. However, students from UENR happened to be the seventh-largest; they explained that COVID-19 brought about teaching and learning deficit of which the university management strategized online learning to address such deficit. GIMPA became the eighth largest; students disclosed the fact that they became digitally literates as the COVID-19 impelled them to study online as it became the requirement of the day. This confirms the study conducted by Kennedy, et al. [6] which says that students are often seen as digitally literate in using technology to support their learning.

Moreover, UHAS’ students emerged as the ninth largest; they expressed that the university management revamped structures in terms of technological space to conduct online teaching and learning for students to learn whiles at home. Students from UPSA arrived at last since the researcher did not get enough students to participate in the study; they indicated that online teaching and learning was the only option to have digital contact with lecturers.

## Digital Applications

The zenith of the COVID-19 brought about the closure of schools in Ghana that actuated an emergence of innovative and educational online tools to support digital teaching and learning to university students. Insightfully, digital applications such as Learning Management System, Zoom, and Google Meet gained popularity in the facilitation of online teaching and learning. This section contains the discussion of the results based on the ways students used the digital applications to fulfill their educational needs during the closure of schools at the peak of the COVID-19.

### Learning Management System

Students shared the concerns that the university's Learning Management Systems were accessed via their websites. Students defined the Learning Management System as the electronic media that has recorded and video lectures with textual information geared toward a specified course of study. The universities' whose students were engaged in the study attested to the fact that they enjoyed every bit of the platform since it was academically resourceful to achieve their semestral curricula. Even though Learning Management System is found on the university's websites but it requires different login details. Students used to have challenges in accessing the platform as these challenges are different from one student to the other. These challenges were expanded by students as system error, poor internet connectivity, and login problems. The system error was known to be a problem that originated from the university server. Students explained that poor internet connectivity emanated from their parts as those from rural areas were deprived of enjoying online teaching and learning. Login problems became obstructions to some sections of students to have access to the Learning Management System.

According to students, the challenges were addressed by the university IT experts and this made the Learning Management System active. The majority of the students used in the study demonstrated how best their universities have been innovative in the peak of the COVID-19 as total sensitization was made on the Learning Management System to students to possess some form of competencies as to how to access the system. This is evidenced by the research written by Crawford, et al. [2] which simplifies that universities around the globe are to convert to virtual learning in a way that the educational sector requires to prepare for a future where learners can be assisted digitally. The majority of the male students were conversant with the system since they understudied it very well so that they could teach their counterpart female students. However, students from the University of Ghana and Kwame Nkrumah University of Science and Technology revealed that they used

the system to the fullest.

### Zoom

Zoom was described by students as the "educational application software of the moment". Students outlined that the COVID-19 had thought them that instructional periods could be distracted at any point in time by an unknown incident therefore students accepted the idea of learning all times to prepare for the future and its accompanying consequences. Students vehemently said that zoom applied in the educational ways was awesome as they were usually learning new things digitally to support and improve upon their basic IT skills. Students were assessed about the reasons why they preferred to have digital teaching on zoom to other applications; they lamented that zoom became popular to everyone therefore it also became convenient to use as it has other support systems where students used to make complaints about topics taught for a very prompt response. Additionally, students explained that zoom has a nice interface where participants' faces were recognized for proper identification. Furthermore, some students shared the view that zoom has options where they used to opt for video as lectures were going on. It was derived that students from the University of Education Winneba interestingly described zoom as a great tool in the space of teaching as far as COVID-19 was concerned.

### Google Meet

Students expressed that Google meet was popularly used by those who were Google users. Students who did not have a Google account were not able to enjoy online lectures held on Google meet. Google meet was believed to accommodate many students as compared to zoom. Students revealed that lectures held on Google meet lasted for only one hour. It was learned that students had the opportunity to enjoy other related services such as Google Docs where they used to work on the same document page online. Moreover, it was disclosed that students who were not having Google account were admonished to create one where audiovisual that showed the steps to create such an account was broadcast to all students. It was found that few female students did not feel comfortable in dealing with Google meet for online lectures because they decided not to create the Google account since they were having other accounts such as Microsoft, and Yahoo. Moreover, students from the University of Development Studies expressed their gratitude to lecturers who assisted them on Google meet aside from the University's Learning Management System.

## Conclusion

The study revolved around the contribution of

Learning Management System, Zoom and Google meet in the fulfillment of educational needs of university students during the closure of schools at the peak of the COVID-19. Based on the results and discussions of the study, it can be concluded that the digital applications supported students resourcefully as they bridged the gap between teaching and learning left by the COVID-19. These educational applications did not let students experience the full negative effects of COVID-19 as they were engaged in digital teaching and learning. Furthermore, universities did commendable work by creating technological spaces to cover teachable topics with students as they were at home. It was recommended that students should have digital literacy so that they could put digital applications into effective and efficient use. Again, educational sectors should have technological structures to support students online so that they could move from conventional teaching to virtual teaching in case of any unknown pandemic that might be much more harmful than COVID-19. Finally, universities should integrate basic computing into programme-based courses so that students could become digitally literate and fully prepared for the future.

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