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Covid-19 Pandemic and E-Learning: Socio - Economic Factors Influencing the Challenges Faced by Ghanaian Universities

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ABSTRACT: The pandemic of COVID-19, which swept the globe, has damaged all facets of human endeavor, including education. As a response to the hazards to life posed by the epidemic, educational institutions in Ghana have had to improvise in order to provide tuition to students in order to mitigate the impact of the virus on students. The school administration at the Nyankpala campus of the identified and implemented e-learning as an alternative to face-to-face instruction, which posed a hazard to the health of students during the epidemic. This study aimed to examine the socioeconomic factors influencing the challenges faced by students in the use of e-learning during COVID-19, with a specific focus on the students of Nyankpala Campus, using both primary and secondary data to debrief the conceptions and theories in order to assess the level of impact of the pandemic and e-learning on students' academic performance. The study also sought to investigate the sources of information on COVID-19 from the respondents and the preventive measures, as these two factors determine their access to electrical devices to participate in e-learning and the extent to which this approach has impacted their academics as the study solicits the pertinent information on the measures implemented by the university's administration to ensure continuous learning. In this regard, the study employed a case study design with qualitative technique as the strategy for eliciting pertinent information through the use of key interview guides and personal interviews. According to the results, 62.31 % of the students are from metropolitan areas, while 37.69 % are from rural areas. In terms of money and social status, the numbers show that 17.69% of students come from high-class societies and 57.69% come from low-class societies. 58.46 % consistently reported poor network coverage, compared to 41.54 % who always had network connectivity. Data bundles, a lack of e-learning devices, and inadequate training were highlighted as the primary obstacles. As a result, several students were forced to miss or leave lectures, which negatively impacted their academic achievement and the delivery of instruction. In the future, it is proposed that the university collaborate with a number of government regulatory agencies, such as the National Communication Authority (NCA), to reduce the cost of data in order to improve internet connectivity on campus, as well as subsidize student tuition fees in order to alleviate the financial burden placed on students.

KEYWORDS: COVID-19, Socio-economic, education, Survey, Network coverage, poverty.

INTRODUCTION

Over the course of history, malaria has been the leading cause of death worldwide, claiming countless lives. For instance, it is believed that more than 2,880 children die each day from malaria within 30 seconds. While the World Health Organization (WHO) and other international organizations create strategies to combat some of these endemic diseases, the global village was recently rocked by tragic news. In the first half of 2020, the rapid spread of a novel coronavirus disease (COVID-19) gripped the world (Qiu and Lu H, 2020; Qiu and Lu H, 2020)The World Health Organization has called the disease's emergence a pandemic due to its worldwide scope (WHO, 2020b). Literature reveals that the pandemic's escalation has resulted in a human tragedy and a catastrophic economic collapse. In addition to posing a modern threat to humanity, the pandemic has successfully halted a number of global activities, including education. For example, by mid-June 2020, the epidemic had claimed over 436, 000 lives worldwide (Qiu and Lu H, 2020; Qiu and Lu H, 2020). In response to the widespread spread of the disease, countries around the world have undertaken a variety of public health measures, such as social isolation, to prevent its spread (Fong et al., 2020). As part of the observed protocols, schools, businesses, community centers, churches, non-governmental organizations, and mass meetings are required to close, travel for essential purposes is prohibited, and lockdown regulations are implemented in a number of nations. These steps are intended to assist in halting the exponential increase and so reduce the strain on medical services (Johns Hopkins University, 2020a).

As predicted, the illness will have a significant detrimental influence on the global economy and educational activities. According to the International Monetary Fund, the global economy will depreciate by 3% in 2020.In addition, a recommendation from the

International Monetary Fund indicates that the global economic downturn is expected to be more severe than the 2008-2009 Global Financial Crisis. Scholars are of the opinion that the plague and government intervention have the potential to produce fear, a rise in economic disparity, and a negative impact on certain socio-demographic groups. In Ghana, the negative impact of the pandemic on its socioeconomic development is manifested in its marketplaces by the rise in food prices, the police's harsh treatment of some merchants, and the economic hardships caused by lockdown directives, among others, all in the name of reinforcing the observance of social distance (Lewis et al., 2020)

Due to the pandemic's global spread, all educational system activities have been halted worldwide. Numerous sources have been analyzed to summarize statistics and indicate ways in which the widespread implementation of COVID-19 has affected education in general and comprehensive education in particular at both the European and national levels. The purpose of this is to provide member countries of the European Agency for Special Needs and Inclusive Education (the Agency) with pertinent information. This effort is comparable to what the government and various agencies (such as the Ministry of Education, European Agency for Special Needs and Inclusive Education, UTAG, policy-makers, etc.) are doing to identify and implement appropriate interventions, such as the implementation of e-learning, to get education back on track.

Thus, the notion of e-learning as described in this article refers to the application of networked information and communication technologies to teaching and learning. It integrates online learning, virtual learning, distributed learning, network and web-based learning. This method has existed for a very long time, so it is not novel to students. However, COVID-19 revives the necessity for educational sectors to investigate online teaching and learning options. Inasmuch as education gives the means to achieve one's destiny, the purpose of education is to shape students into better individuals. Education also helps to instill social duties. The essence of education is learning.

As suggested by Lachman, learning refers to a change in behavior caused by experience. In other words, learning is viewed as a function that translates experience into behavior. They believe that the objective of learning is to induce behavioral change, and hence the intended outcome of the process should not be compromised (Lachman, 1997). However, the COVID-19 outbreak has left its mark on schooling. The global spread of this hazardous virus has compelled educational institutions to close in order to prevent its spread among teachers and pupils. This necessitated improvising an alternative method of teaching and learning while adhering to the established regulations, such as the lockdown, among others. E-learning is the only viable alternative that can be conceived.A report from UNESCO reveals that university and school closures have various negative effects on students, depriving them of possibilities for growth and development and the realization of their tremendous potential. According to Demirbilek (2014), students from disadvantaged socioeconomic backgrounds rely heavily on the school's Internet access for study and browsing because they cannot afford the high cost of airtime. Demirbilek (2014) also says that people who don't have access to computers may be at a disadvantage, making it harder for them to take part in e-learning.

Incorporating findings from Fishbane and Tomer (2020) demonstrates that when the degree of poverty rises, the rate of internet connectivity plummets, and as a result, students with limited socioeconomic ability to buy broadband connections are most likely to face additional obstacles in E-learning. In addition, not all students will be able to afford a smartphone or a laptop in order to access online teaching and learning (Fishbane & Tomer, 2020). For these reasons, the purpose of this study is to identify the socioeconomic elements that influence the obstacles that Nyankpala Campus students have when utilizing e-learning during the COVID-19 pandemic.

METHODOLGY

This chapter focuses on the research strategy and methods pertinent to the investigation. The chapter then dug into sample and sampling techniques, defining the target population and detailing the sampling methods utilized in the knowledge inquiry process. The chapter goes on to examine the analytical techniques used to analyze the data collected in the field. The chapter concludes with a concentration on the Study area. This essentially refers to a thorough master plan outlining the research methodologies. According to Nel-Kotze, Gerber-Nel, "research must be conducted in a sequential and objective manner to assure the impartiality of the data collected. The goal of this study is to evaluate the socioeconomic factors determining the obstacles students face when utilizing e-learning during COVID-19, using Nyankpala Campus students as a case study. In light of this, the research employed a Case Study Research Design. According to Stake (1995), the rationale for employing this design is that it gives extensive information by employing a variety of data collection methods over an extended period of time. As cases are inevitable due to the passage of time and the nature of human endeavors, the design's strength lies in its capacity to serve as an inquiry technique that enables in-depth examination of an event, program, process, or activity. In this regard, the group designed both semi-structured questionnaires and interviews in order to collect the necessary data on the study topic from the intended respondents.

In accordance with the chosen design and in order to achieve the stated objectives, this study sought and employed qualitative research techniques, including interviews with key informants and in-depth personal interviews, with the management staff of and students from all faculties and departments. According to Creswell (2007), the method provided as a way to investigate and analyze

the interpretations/meanings that groups or individuals attributed to a social occurrence or human problem. In this regard, this method was used to elicit, explore, and comprehend information from students regarding their class and residential backgrounds, their access to ICT such as smart phones, laptops, and the internet; how easy or difficult it was to participate in the virtual lectures and exams, etc.; how they dealt with the challenges; and how the virtual lectures affected their access to knowledge and performance in the courses, among others. In addition, the technique was utilized to collect data from the campus management of the university's seven faculties and twenty-two departments regarding the relevant steps implemented to address the needs of the vulnerable students. Briken defines sampling as the systematic selection of representative cases from a broader population. The University has a total student population of 21,000, with 5,700 students on the Nyankpala Campus. This study utilized the following sample size formula to determine the size of the sample which is: n= N/(1+ 〖Ne〗 ^2) Where n is the sample size, N is the total population, and e is the researcher-specified margin of error. In this investigation, the permissible error was 5 % with a 95 % confidence interval because the study was concerned with individuals whose personal biases could affect the level of precision. N = 5,700 (representing the student population of Nyankpala Campus) and e = 0.05, according to the formula. n = ((5, 700))/(1+5, 700 〖(0.05)〗 ^2) n = (5, 700)/1550.253 = 373.770 n = 374 approximately. The sample size based on the formula to be used for the study is 374, but due to time and budget constraints, the study will only consider 150 randomly selected respondents. These respondents will include students at all levels (from level 200 to level 400) from varied backgrounds (e.g., rural, urban, males, females, rich, poor, middle class, etc.) as well as the administration. In order to acquire data for the study's knowledge enquiry of the study area, the following approaches were used: Purposive sampling: Using this methodology, 20 key informants with direct responsibilities for giving pertinent information about the procedures in place to ensure the implementation of e-learning were interviewed. The key informants will consist of department and faculty heads, deans, and professors. This method was also utilized to determine student population units based on their departmental information. The interviews were conducted via online (WhatsApp), phone calls, and in-person meetings with a minimum of four students from each department (levels 200 to 300) and twenty final-year students conducting research on campus. Both primary and secondary information was collected from the study area. Regarding the topic under research, the primary data came from key informants and the student body, while the secondary data came from online and published books and articles. Among the key data collection methods were the following: Detailed Individual Interviews: This was used to investigate opinions of the accessible information on COVID-19, the problems encountered in the usage of e-learning, and the socioeconomic factors impacting these challenges. Interview with a key source: This method was utilized to collect information from respondents. Both approaches utilized open-ended questions.Field notes were utilized to collect information from respondents in the field.This device assisted in the administration of questions through the recording of interviews.SPSS was utilized to examine the gathered data (version 20). The recorded audio interviews with key informants were transcribed, classified, and analyzed based on the data's developing themes. This was accomplished by carefully reading the materials and coding for themes. Using content analysis, cross tabulations and frequencies, graphs and charts, the study carefully investigated and interpreted the collected data in relation to their respective aims (types and accessibility to media platforms for e-learning, and knowledge about COVID-19, etc.).

DISCUSSION

This paper's discussion will be guided by the following set of questions: What socioeconomic characteristics influence the problems students confront when using e-learning during COVID-19? What information is available about the influence of COVID-19 on education? What obstacles do students experience when using e-learning in the midst of COVID-19? What steps does the management of the staff take to meet the needs of students who are vulnerable?

PROFILE OF STUDY AREA

The Ghanaian government founded the in 1992 in an effort to expedite the development of Ghana's three (3) northern regions (the Northern, Upper East, and Upper West Regions). It was formed as a multi-campus school and is the fifth public university to be founded in Ghana. It is comprised of four (4) campuses, eight (8) faculties, one medical school, one graduate school, one institute, and three (3) centers. There are currently 21, 000 inhabitants. At Nyankpala Campus, there are 5,700 students, whereas Dungu Campus has a student population of 15,000, of which 300 are seniors.Nyanpkala is a settlement in the Tolon-Kumbungu District, approximately 16 kilometers south-southwest of Tamale, the capital of the Northern Region in northern Ghana. This campus is the first of the university's four campuses and the first to be created in northern Ghana. The Faculty of Agriculture was the first faculty to be founded in September 1993, with 40 students enrolled. On the Nyankpala Campus, there are now 22 departments. There are currently four (4) faculties and a school on the Nyankpala campus. These are the Faculty of Agriculture (FOA), the Faculty of Natural Resources and Environment (FNRE), the Faculty of Agribusiness and Applied Economics (FAAE), the Faculty of Communication and Cultural Studies (FCCS), and the School of Engineering (SOE).

Source: (http://www..edu.ghabout us/history-and-facts. Retrieved October, 10, 2018).

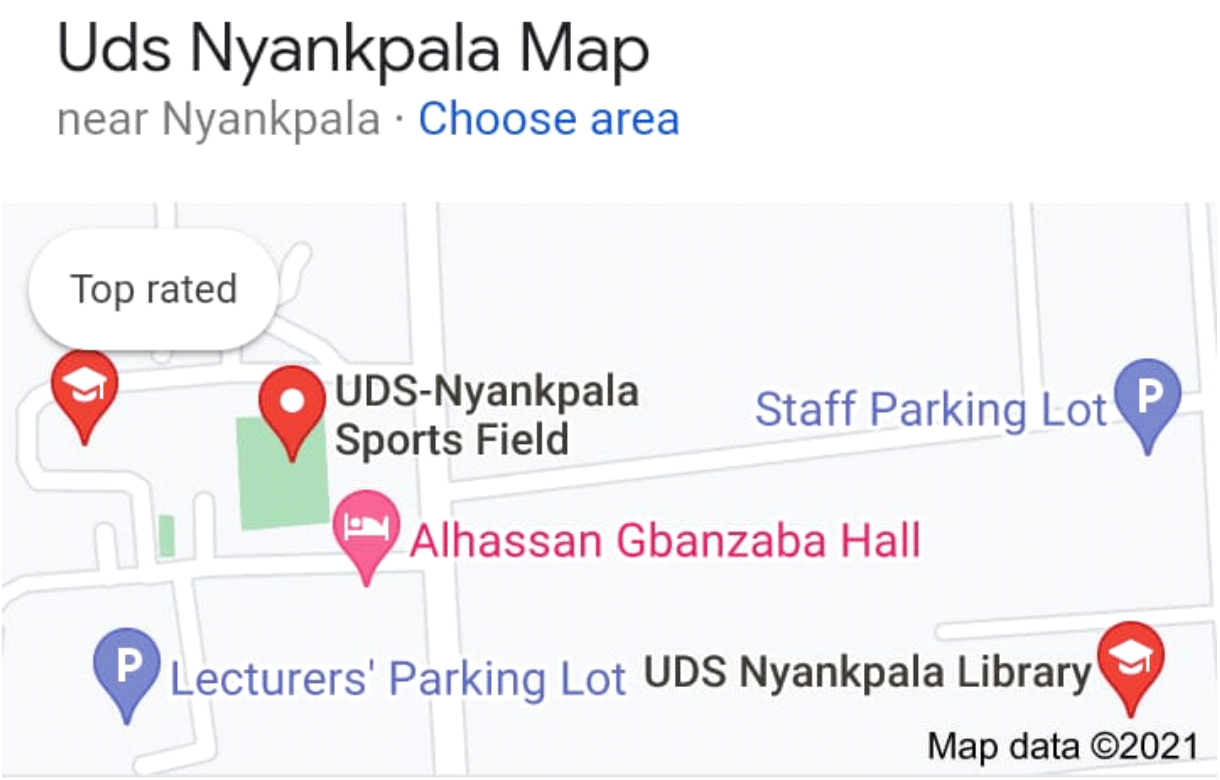

Figure 1.1. Map location of , Nyankpala Campus.
(**Source:** (http://www..edu.ghabout us/history-and-facts. Retrieved October, 10, 2018).

DEMOGRAPHIC CHARACTERISTICS

Gender distribution is a significant socio-demographic variable as it relates to roles, and subject of discourse in the twenty-first century. Based on the results from the survey, it shows that only 7 representing 35% out of 20 staff management workers made themselves available to be interviewed. Among the 7 interviewed staff members of the university, 5 are males representing 71.4% whereas 2 being females representing 28.6%, occupying the positions as Heads of Department and Lecturers. The reason for the low participation of staff management in the study was due to the fact that, during the time the study commenced, the University Association of Ghana (UTAG) had gone on indefinite strike dated 22nd August, 2021. Those interviewed were actually those who had come around to attend to their private works. Another reason that could be attributed to the low number of participation is as a result of the unwillingness of some staffs to partake in the study.

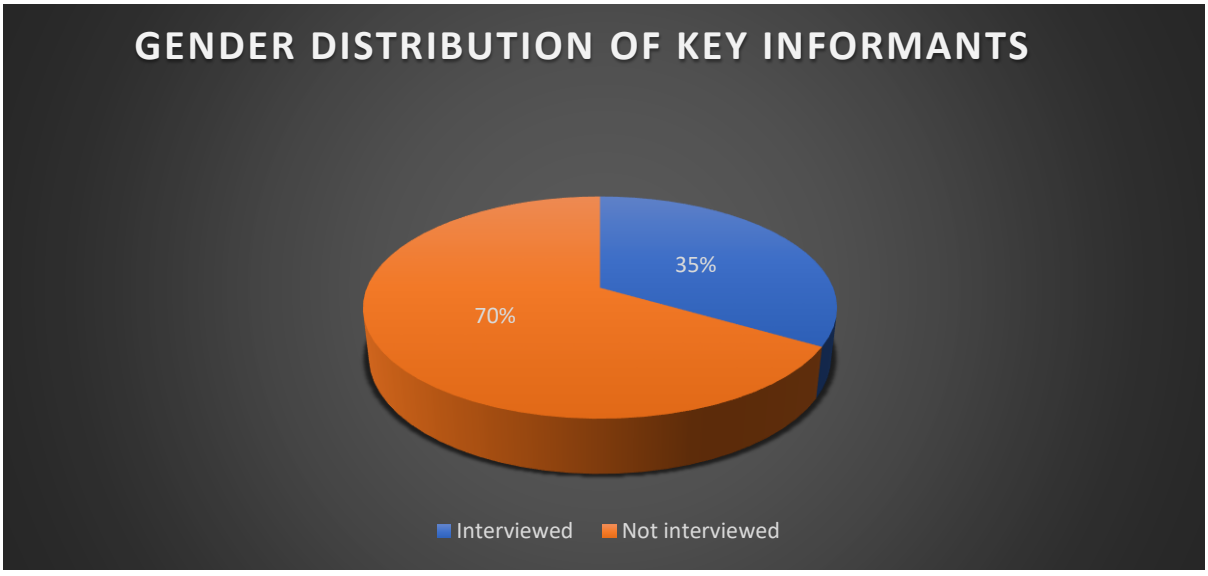

Fig. 1. Gender Distribution of Key Informants.

SEX DISTRIBUTION OF RESPONDENTS (STUDENTS)

Based on the data gathered by the researchers, 75 female representing 57.7% as against 55 male respondents representing 42.3% out of the sampled (130) respondents made themselves available for the study. This is illustrated in table 1 below. The reason for the high number of female involvement in the study is as a result of their high interest level in the subject of the study as compared to the male respondents as this wipes off the social construct of females' place being the kitchen. This could also be attributed to the high ratio of educated females as against their ratio that equips them with knowledge to be fit in the society.

Table 1. Showing Gender Distribution of Student Respondents.

Variable	Frequency	Percentage (%)
Male	55	42.3
Female	75	57.7
Total	130	100

(**Source:** field survey, 2021).

Age Distribution of the Respondents (Students)

Age is a significant demographic variable that defines the active labor force and dependents in a given economy. It also determines how actively the youth being students are involved in economic activities in the country. With regards to the study, it determines how socio-economic factors influence the challenges faced by students in the use of e-learning during the period of COVID-19 pandemic lock down. Results from the survey reveal that, 116 student respondents representing 89% are within the age range of 18-28 years, with 14 representing 10.7% falling within the age category of 29 to 39 years. The survey clearly shows that none of the students fall within the ages of 40 and above. The implication of this analysis shows that, all the respondents under study are active labor force and can actively work hard towards the economic growth of their individual families and the country at large after graduating, but in a situation where they are to stay off from school for longer periods due to pandemic lock down, their working age will be affected negatively thereby resulting into low active labor force in the country while increasing the dependency ratio on the individual families and the country. Hence, the need to improvise a mechanism to ensure continuous learning. This is shown in table 2 below.

Table 2. Age Distribution of Student Respondents.

Variable	Frequency	Percentage (%)
18 -28 years	116	89
29 – 39 years	14	10.7
40 and above	0	0
Total	130	100

(**Source:** field survey, 2021).

Educational Levels of Respondent (Students)

The educational background data of discussants was taken according to the various levels of undergrads, from 200-400 and the results were summarized in the table 3 below. From the summarized data, out of the 130 respondents, 37 representing 28.46% are students who are in their second year of studies (Level 200), with 31 of them representing 23.85% in Level 300 and the remaining 62 representing 47.69% being in their final year of studies. In comparison, the survey shows that majority of the respondents to take part in this study were the final year students, followed by Levels 200, and 300 in that order. This could be attributed to the fact that, most of the students had gone on vacation leaving only the final year students behind working on their theses, with the few number of Levels 200 and 300 students observing their TTFPP orientations and internships on campus respectively as at when the survey was conducted.

Table 3. Educational Level of Respondents (Students)

Variable	Frequency	Percentage (%)
Level 200	37	28.46
Level 300	31	23.85
Level 400	62	47.69
Total	130	100

(**Source:** field survey, 2021).

Program of Study by Respondents

The Nyankpala campus has four faculties and a school. These faculties include; Faculty of Agricultural Food and Consumer Sciences (FAFCS), Faculty of Natural Resource and Environment (FRNR), Faculty of Bioscience, Faculty of Communication and Cultural Studies and School of Engineering. Among the programs studied within the four faculties and the school includes, Social Change Communication, Family and Consumer Sciences, Renewable Natural Resources, Food Science and Technology, Biotechnology and Molecular Biology, Agricultural Technology, Agricultural Education, Vetinary Nursing, Mechanical Engineering, Agricultural Engineering and others. According to the survey, 16 of them representing 12% are students belonging to the Family and Consumer Sciences, 30 of them representing 24% are pursuing Social Change Communication, 8 representing 6% pursuing Biotechnology and Molecular Biology, 13 representing 10% reading Food Science Technology, with the remaining ones of 18 representing 14% and 4 representing 3% pursuing Agricultural technology and Vetinary Nursing respectively. The survey also reveals that, 17 of them representing 13% are offering Renewable Natural Resources, whereas 6 representing 5%, 4 representing 3% and 3 representing 2% are the group of respondents pursuing Agribusiness and Economics; Mechanical Engineering and Agricultural Engineering respectively. The results clearly demonstrate that, respondents from Social Change Communication program are the most top leading in this study, followed by respondents from Agricultural Technology in that suit as this may explain about the specific program whose students had the interest in having the learning process continuous. This is represented in the table 4. as follows.

Table 4. Program of Study Distribution

Variable	Frequency	Percentage (%)
SCC	30	24
FCS	16	12
AGT	18	14
RNR	17	13
FST	13	10
AGE	11	8
BMB	8	6
AGB	6	5
VTN	4	3
ME	4	3
AE	3	2
Total	130	100

(**Source:** field survey, 2021).

Place of Residence

The survey classified the location or residence of the respondents into urban, rural based on their access to internet as against their participation in the e-learning. The results from the survey demonstrate that, out of 130 respondents, 81 representing 62.31% and 49 representing 37.69% are from urban and rural settings respectively. Thus, during the pandemic, schools including had closed down. Students therefore made to lectures via online from their various destinations. In an interview with the students through calls and face-to-face, their respective destinations were made known. This was done so to identify their accessibility to specific internet as this would influence on their attendance to e-learning lectures. Below is the quantitative analysis of respondents' place of residence.

Table 5. Place of Residence distribution of Respondents

Variable	Frequency	Percentage (%)
Urban	81	62.31
Rural	49	37.69
Total	130	100

(**Source:** field survey, 2021),

The table shows that students that come from or stayed in an urban area during the pandemic are more than those that come from the rural areas. However, the available data reveals a clear disparity between urban haves and the rural have not. There is uneven spread of internet connectivity in the country which motivated most of the students from the urban Centers to have uninterrupted

access to internet connectivity, leaving the rural have not behind during online lectures. This clearly explains how economic factors can have influence on a student's performance negatively.

Network Coverage

From the survey, it was realized that, the most and common networks that students used by the respondents for the online learning are MTN and VODAFONE. Majority of the respondents preferably used both networks simultaneously in order to change to the favorable one wherever they find themselves. Yet, they had network challenges. From the survey, it was revealed that, 76 representing 58.46% experienced a weak network coverage as against 54 representing 41.54% experienced a strong network coverage. Below is the quantitative analysis of network coverage of the respondents.

Table 6. Network Coverage Distribution of Respondents

Variable	Frequency	Percentage (%)
Strong	54	41.54
Weak	76	58.46
Absence of Network	0	0
Total	130	100

(**Source:** field survey, 2021)

Income and Social Status of Respondents Family

In a quest to know about the income and social status, the respondents were interrogated and the following are the results that were obtained. In comparison, the results in table 7 the results reveal that those with high (17.69%) and middle (57.69%) income status are obviously from the high and low class societies respectively and could therefore afford to have access to learning devices and data, and would hence, benefit from the online classes. But those with income status of between 13.08% and 11.54% are those within the privileged and underprivileged classes of the society respectively in table 7. In implication, they may not have the purchasing and the accessibility power and therefore cannot benefit from the online classes. This clearly shows that, socio-economic factors have the tendency of influencing the challenges faced by students in the use of e-learning.

Table 7. Income Status of Respondents

Variable	Frequency	Percentage (%)
Low	17	13.08
Lower	15	11.54
Middle	75	57.69
High	23	17.69
Total	130	100

(**Source:** field survey, 2021).

Table 8. Social Status of Respondents

Variable	Frequency	Percentage (%)
Privileged	57	43.85
Underprivileged	21	16.15
High Class	34	26.15
Low Class	18	13.85
Total	130	100

(**Source:** field survey, 2021).

ASSESSMENT OF THE AVAILABLE INFORMATION PUBLISHED ABOUT THE IMPACT OF COVID-19 ON EDUCATION.

Impact of COVID-19 on Education

COVID-19 pandemic has spread to practically every country and territory on the planet. The ramifications are far-reaching, affecting every human endeavor, including teaching and learning. Sumitra and Chhetri (2020) asserts that, traditional educational techniques have been severely thrown into disarray as a result of rules that restrict migration and social distance. As a consequence, educational

institutions, including the have had to improvise by adopting the face-to-face method of instruction. As stated in chapter one, literature reveals that the escalation of the pandemic has ensued in a human tragedy and terrific economic collapse and has successfully forced global shutdown of several activities, including that of education. Educational institutions were immediately examined for closure in response to previous measures that were deemed ineffective. Universities including were forced to do all of their business with students online as a result of the pandemic.

The survey provided some of the problems COVID-19 has posed on teaching and learning, Hiltz and Turoff (2005), argue that in the next 50 years, the modern-day conversion will be seen as innovative changes in higher education as a process and as an institution.

These problems include Education became very much expensive resulting in a clear disparity between the rich and the poor in society.

Insufficient training on online teaching to both Lecturers and students and as a result left many students behind during the pandemic.

Lack of teaching materials during the pandemic.

Poor network and high cost of data which made teaching and learning difficult for students and lecturers.

Teaching was not always successful since access to lecture was only limited to access to electronic device.

Quality teaching and learning was significantly only enhanced among students who have available electronic device and have access to data connectivity.

Students on the other hand, had challenges on learning materials, poor network and high cost of data which affected their knowledge and performances in the courses.

Knowledge on Covid-19

Students' knowledge on COVID-19 pandemic is very important. The survey therefore provides some level of knowledge students have about the pandemic. These include, viral disease, contagious disease, airborne disease and an incurable disease. From the survey it was revealed that, 40 respondents representing 30.77% disclosed COVID-19 is a viral disease, 39 respondents representing 27.69% made a claim that, the pandemic is a contagious disease, whilst 47 respondents representing 33.85% allegedly said, the pandemic is a deadly disease, and with 4 persons representing 3.08% are of the view that, it is an airborne disease respectively. The remaining 4 representing 3.08% hold the evidence that the pandemic is an incurable disease. The figure 2. below illustrates the information above.

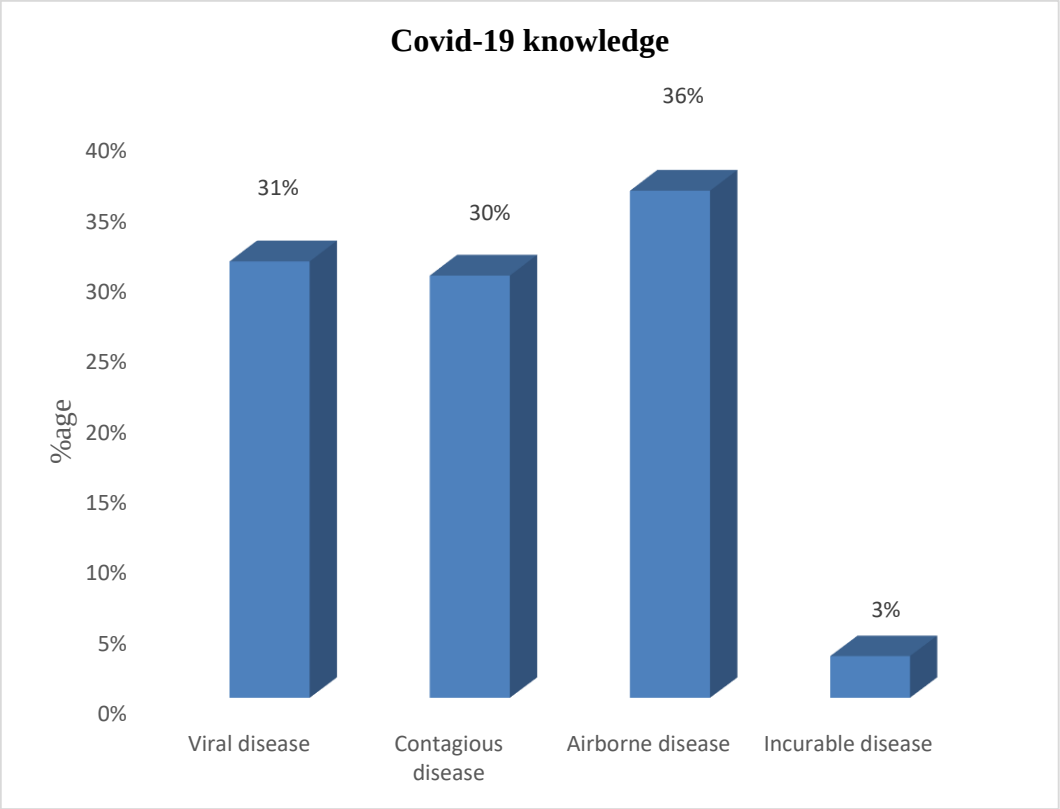

Figure 2. Responses on knowledge on Covid-19
Source: Field survey 2021

Sources of Information

This section also analyzes respondents' source of information. Thus television, internet, newspaper, family, friends, social media, radio and religious group. From the survey, 32 respondents representing 25% received their information through television, internet had 23 respondents representing 18%, newspaper, 10 respondents representing 8%, family, 10 respondents representing 8%, friends, 14 respondents representing 11%, social media with 19 respondents representing 14%, radio, 20 respondents representing 15% and lastly religious group, 2 respondents representing 1%. The figure below represents the data above. In comparison, the results show that, television was ranked as the highest source of information about the pandemic, followed by newspaper in that order.

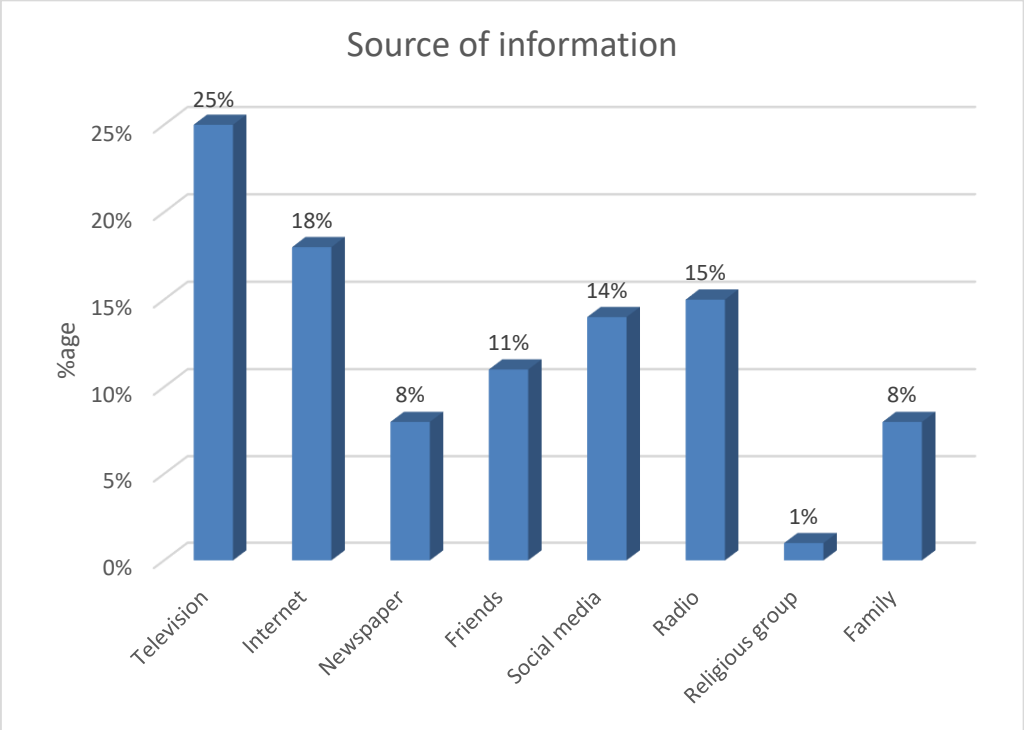

Figure 3. Responses on sources of information

(**Source:** Field survey, 2021).

Digital Device Accessibility.

With access to digital device, 103 out of 130 respondents, thus 79% had access to digital devices while 27 (21%) respondents did not have access to any digital device.

The digital devices the 103 respondents had access to, include laptop, mobile phones and iPad. From the survey, 40 representing 39% respondents had access to laptop, with 62 of them representing 60% had access to mobile phones, and 1 person representing 1% had access to an iPad. This is illustrated in the table 9 as follows.

Table 9. Accessibility to Device

Variable	Frequency	Percentage (%)
YES	103	79
NO	27	21
TOTAL	130	100

(**Source:** Field Survey, 2021).

4.5. Digital Device Available

Table 10. Availability to Digital Device

VARIABLE	FREQUENCY	%AGE
LAPTOP	40	39
MOBILE PHONE	62	60
IPAD	1	1
TOTAL	103	100

(**Source:** Field Survey, 2021).

The above data reveals that, quality teaching and learning could not be enhanced among students who could only access the learning platform via mobile phone. About 60% of student were not efficiently engaged due to the unavailability of electronic devices throughout the period of the pandemic.

ASSIGNMENT TO IDENTIFY THE CHALLENGES FACED BY STUDENTS IN THE USE OF E-LEARNING IN THE MIDST OF COVID-19.

Challenges faced by students in the use of E learning during the pandemic

From the survey, it is shown that 97% of the respondents confirmed that, e-learning was their mode of learning during the pandemic. 39% are those who could afford to purchase the device, whilst the remaining 38% had it through their parents and 23% of them acquired their devices through their friends respectively.

Yet they had difficulties in accessing the online lectures. Some of these difficulties are poor network, not able to purchase airtime and those that had no access to any digital device were left out in the e-learning process. As a result of these difficulties, students had to skip or forgone lectures, others said they had to move to different locations for network, some call friends later for information and some also messaged the lecturers.

The class attendance level of the respondents was categorized as poor, average and good. Majority of the respondents thus, 39% said their class attendance level was on the average, followed by poor, with the remaining 32% and 29% claiming their class attendance level was good. Internet teaching and learning activities require a diverse set of technology, materials, instructional methodologies, responsibilities, organization, structure, and forms of engagement, observation, and aid, with multiple replacement and incorporation options.

Besides it affected students' knowledge and grades in their academics during the pandemic. From the survey, 74 respondents (57%) said their acquisition of knowledge was poor, 21 respondents (16%) said it was average and 35 respondents (27%) said it was good. In addition, 46 respondents representing 35% reportedly said, they were satisfied with their grades, whereas 82 respondents representing 63% and 2 persons representing 2% claimed, were not satisfied and very satisfied with their grades respectively. The table 11 below illustrates the above information.

Table 11. Effects on Knowledge and Grades Distribution of Respondents Knowledge

Variable	Frequency	Percentage (%)
Poor	74	57
Average	21	16
Good	35	27
TOTAL	130	100

(**Source:** field survey, 2021)

Grades

Variable	Frequency	Percentage (%)
Satisfied	46	35
Not satisfied	82	63
Very satisfied	2	2
TOTAL	130	100

(**Source:** field survey, 2021).

ASSEMENENT TO IDENTIFY THE MEASURES IMPLEMENTED BY THE STAFF MANAGEMENT OF TO ENSURE CONTINUOUS LEARNING.

Effects of Covid-19 on teaching and learning on the Nyankpala Campus of the University for Development can be determined by the acquisition of data by the campus management of the university on the respective measures that were put in place to meet the needs of the vulnerable learners. In a quest to know about this, an interview was conducted with lecturers and the following responses were retrieved.

Measures implemented by Management to meet the needs of students.

Conferring with lecturers, the only measure Management could put in place was to set up e-learning platforms for students to partake in their studies. And from the survey, 76 student respondents (58%) said e-learning was the measure Management put in place, 22 respondents (17%) said there was no proper measures and 32 respondents (25%) said they did their submission via lecturers' emails. The Head of Department at the Faculty of Agriculture, Gustuv… had this to say;

"*When the COVID started, we engaged the final year students online to do their project work and presentations. Secondly, continuous students were also made to complete lectures and exams online and in terms of the classroom, we try to space them". (Interview, August 31, 2021).*

E-learning has not been easy since not all students can afford data. And according to students, the most virtual platforms used for online lectures are zoom, Google classroom, WhatsApp, E-learning platform and Google meet, which they all required data bundle for operation. One of the level 400 students, Okwara Orlando had this to say;

"Data bundle was a hurdle despite the fact that we were able to obtain training on the online platforms." It would have been more convenient if the administration had established an internet cafe. Moving ahead, I believe that should be executed." (Interview, 23 August 2021)

From the survey, most of the lecturers lamented that academic work has been disrupted due to the pandemic. Though there have been some successes but not as much as when there was no pandemic. According to the lecturers, the challenges faced by Management in implementing e-learning, includes unstable network, inadequate preparation of staffs and cost and inadequate knowledge of e-learning. According to the Dean, Faculty of Communications and Cultural Studies, in the person of Dr. Edward,

> '*During the pandemic there were different ways to do academic work. The usual way of face to face would not work…online teaching and learning was adopted…some training was done for the staff and I must say insufficient training because not all the staff understood it'.* (Interview, August 31, 2021)

Notwithstanding the inadequate understanding of the online process by some lecturers, lectures were appreciably successful as those lecturers made use of WhatsApp and other university platforms to reach out to students during lectures. Management was emphatic that measures adopted were successful in delivering on their mandate notwithstanding the challenges enumerated above.

CONCLUSION

A pandemic is thought to have a negative impact on global systems. For the first time in history, schools across all levels had to observe lock-down protocols in order to ensure the safety of learners and instructors. The university had to introduce e-learning for the participation of students in their studies. The study obtained the following responses from students: 58% claimed that the only approach the university put in place was the introduction of online learning. 76 of the respondents, representing 58.46%, said they constantly experienced weak network coverage. 54, representing 41.54% who had access to the network at all cost. The COVID-19 fiasco has made education very expensive and created so much disparity between the rich and the poor in society. The pandemic has had a detrimental influence on academic achievement; social and material disparities have impacted educational outcomes. As a result, teaching and learning were difficult; class attendance was poor; the impact of knowledge was not encouraging; and impact grades were unsatisfactory.

The results show that there were challenges, yet online lectures proceeded and were somewhat successful. The sharp drop in the academic performance of 63% of students revealed in the report is an indication that "when two elephants fight, the grass begins to suffer". The United Nations Sustainable Development Goal, "Quality Education for All", is now a big question to be reckoned with. In spite of all the struggles that the vulnerable in society must go through to pay tuition to have access to education, the right to think and learn is limited to a so-called commodity, "data".

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