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ONLINE TEACHING AND LEARNING: PERCEPTIONS AND READINESS OF PRE-SERVICE TEACHERS

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ABSTRACT: *The study sought to evaluate pre-service teachers' perceptions and readiness towards online learning in Akatsi College of Education. The study used descriptive survey design. A structured questionnaire was used to collect data from two hundred and twenty-three pre-service teachers who were purposively sampled for the study. The data collected was analysed using percentages, means and standard deviations. The results revealed that majority of the pre-service teachers preferred face-to-face to online method, found it difficult using online learning facilities. Majority of the pre-service teachers perceived that the use of online learning would improve their creativity in disseminating and experiencing learning. In addition, majority of the pre-service teachers did not have good internet broadband to get them connected to an online learning class. They were also distracted at homes during online lessons coupled with erratic power supply. Majority of the preservice teachers have negative perceptions and were not ready for online learning. Consequently, it was recommended that Government of Ghana invested more in the area of communication infrastructural facilities as well as partnering with telecommunication companies to provide very effective broadband internet connectivity to college servers and students at reasonable cost to facilitate online learning classes.*

KEYWORDS: online learning, pre-service teachers, perceptions, readiness, COVID-19.

INTRODUCTION

In lieu of the COVID-19 crisis, the government of Ghana announced the suspension of all school operations both pre-tertiary and tertiary on March 15, 2020, as parts of the efforts to stop the spread of the virus (Cromwell, 2020). The closure of universities and schools have disrupted the learning of students and have deprived students opportunities for growth and development (UNESCO, 2020). Digital learning emerged as an ultimate response to the disruption in education due to the COVID-19 lockdown of schools. Since the lockdown, the government of Ghana has considered the possibility of initiating online courses for students.

Smart and Cappel (2006) observed that the concept "e-learning," "online learning," and "web-based learning" have been used interchangeably. Kharve and Gogia (2016) defined online learning or e-learning as a process of learning by electronic means which involves the use of computer, mobile phone or other electronic devices and accessing internet. There are two types of online learning: the synchronous interactive settings where learners meet in real time. This type of learning depends entirely on internet based resources and support systems through

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which anybody with connectivity can access anywhere and learn. Asynchronous online-learning on the other hand, involves interactive sessions where participants interact at different times. Even though, online education tends to be more affordable, it is more cost-effective than traditional education (Josep, 2020).

According to Branch and Dousay (2015), creating a collaborative and interactive learning process, learners can give their immediate feedback and ask questions. The swift shift from the face to face or the normal classroom interaction to the online interaction between the teacher and learner emerged with a lot of challenges (Naa, 2020). Some of the challenges included how to assess learners online, appropriate technological device to use, access to internet connectivity, funds for data and how the teacher will have provided feedbacks to learners (Naa, 2020). Li and Lalani (2020) recounted how some students without reliable internet access and/or technology struggle to participate in digital learning.

However, Morrero-Guerero, Aznar-Diaz, Caseres-Reche and Alonzo- Garcia (2020) assessed the use of e-learning in teaching mathematics with a quasi- experimental using controlled and experimental groups. The results showed that the use of e-learning method has a positive influence on motivation, autonomy, participation, mathematical concepts, results and grades. Bao (2020) argued that the going online learning requires significant planning and investments from universities and colleges to hitherto take students and instructors through an online training, such as recording platforms both on campus and at home to get the instructor to record and present the work in a manner that can be accessed by students, otherwise the online plan ends right here.

Meanwhile, Goh and Sandars, 2020 reported that most of the higher institutions in were unprepared (both in material and human resources) for the unprecedented online teaching delivery, and most students were mentally and materially unprepared for the switch to online learning. Many teachers and lecturers have never been formally trained to teach online, neither have students been trained or had prior experience of learning online. Hence, most institutions were caught off-guard by sudden move to online education.

In contrast to developed countries where a team of experts are usually engaged to design and develop online courses and instructions, instead many colleges of education tutors in Ghana are required to design and develop their own digital lessons. This study therefore sought to explores the perception and readiness pre-service teachers towards online learning in Akatsi College of Education.

Statement of the Problem

As result of inadequate infrastructure coupled with the outbreak of COVID-19 Pandemic, the Government of Ghana through National Council for Tertiary Education (NCTE) directed colleges of education to teach pre-service teachers using online platforms. Meanwhile, Larbi-Apau, Sampong and Kwofie (2020) in their study of barriers to online learning adoption in higher education confidently pointed out that the existing physical structures in higher education systems in Ghana are not designed to support emerging educational technologies.

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According to Larbi-Apau Sampong and Kwofie (2020) due to lack of adequate training, compensation and support systems, and dedicated offices and instruments to guide the processes of content design and development, many lecturers were forced to post online, courses and notes that were originally structured for face to face classroom interactions. Ogbonnaya, Awoniyi, and Matabane (2020) observed in many institutions of learning in Africa, some teachers and lecturers do not have enough knowledge of how to use computer, and many might not know how to teach using online platforms. Besides, most of the students might not own desktop or laptop nor smartphones to enable them to access online learning. Hence, meaningful online teaching and learning during the pandemic was a serious challenge to many students and teachers in Africa. Furthermore, Ogbonnaya et al. (2020) explored the online learning experiences of pre-service teachers at a Ghanaian university using descriptive survey design. The findings suggested that the pre-service teachers were digitally literate and mostly accessed online using smartphones. However, pre-service teachers experienced poor internet connectivity, high cost of data, erratic power supply and family interruptions during online learning sessions.

While stakeholders of education in Ghana made a lot of effort to organize training sessions for tutors in Colleges of Education in Ghana to use online platforms, no study has far been conducted inform stakeholders of education concerning the perceptions of pre-service teachers as well as their readiness to continue using the online platform. Therefore, problem of the study was to assess pre-service teachers' perception and readiness for online teaching and learning.

Purpose of the Study

Since the lockdown, the government of Ghana initiated online courses for students. However, the National Union of Ghana Students (NUGS) has petitioned the government to halt all online academic activities launched across the country (Anyorigya, 2020). The NUGS referred to the online learning as "challenge-ridden online learning". The association cited inadequate bundle incentives for schools (lecturers and students), lack of properly laid framework for the implementation of online learning, and the plight of needy students who have been left out of the online learning platforms because of their inability to settle school bills. Another concern raised by the NUGS is the possibility of compulsory exams and assignments on e-learning platforms that will disadvantage students who are unable to participate in the online learning because of factors beyond their control.

However, Colleges of Education due to insufficient infrastructure coupled with Covid-19 pandemic implemented synchronously and asynchronously online teaching and learning for pre-service teachers. Therefore, the purpose of this study was to assess pre-service teachers' perceptions and readiness to continue participating in online teaching and learning.

Research Questions

1. What is the perception of students towards online teaching and learning?
2. How ready are students' towards using online learning platforms?

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Significance of the Study

Since online teaching and learning in the Colleges of Education in Ghana will not end any time soon, the findings of the study will inform Conference of Principal of Colleges of Education (PRINCOF) and Ghana Tertiary Education Commission (GTEC) to secure robust and user friendly Learning Management Systems which would not rely on the use of excessive internet bundle.

LITERATURE REVIEW

Students' Perception towards Online Learning

With regards to the students' perceptions of online learning, and relationship between students' perceptions and mathematics learning achievement, Huda, Wahyuni and Fauziyah (2020) studied a sample of 88 students who were randomly selected from the population of 216 found that as many as 73 (82.95%) students have good perception of online mathematics learning. However, Abbasi, Ayoob, Malik and Memom (2020) surveyed the perceptions of students towards e-learning found that they have negative perceptions towards e-learning. As a result of the coronavirus pandemic, governments shut down higher institutions to control the further infections. In order to ensure uninterrupted teaching and learning, universities and colleges introduced online learning. According to Olayemi, Adamu, and Olayemi, (2021), the introduction of online learning generated a lot of controversies ranging from lack of technological skills and poor infrastructural facility to support learning. Other researchers therefore explored perception and readiness of students towards on line learning during the COVID-19 Pandemic.

Concerning the usefulness of online learning, Olayemi, et al. (2021), found that 81 (54.7%) strongly agreed, and 59 (39.9%) agreed that online learning was useful to them in the era of the Covid-19 pandemic. To the researchers this was considerably positive reaction as compared to 5(3.4%) and 3 (2.0%) respondents who disagreed and strongly disagreed respectively. The result indicated clearly that majority of the respondents have a positive perception to the usefulness of online learning in the Covid-19 era. However, how easy pre-service teachers can use online platforms is important to facilitate how they can access learning materials which is a prerequisite for their motivation and satisfaction. A large number of the respondents in the study 92 (62.2%) agreed and 44 (29.7%) strongly agreed that when implemented, online learning will be easy to use.

Digital creativity is concerned with using digital tools and technologies to explore creative ideas and new ways of displaying ideas, research, or work. Ogbonnaya et al. (2020) reported that majority of the respondents confessed that the use of online learning will go a long way to improve their digital creativity skills such as new ways of creating, disseminating and experiencing learning. It was revealed that 85 (57.4%) strongly agreed and 59 (39%) of the respondents agreed. In addition, Ogbonnaya et al. (2020) found that students are digitally literate. Thus Out of the 147 students that attended to the rating, 22 respondents, representing 15%, rated their digital literacy excellent; 47 (32%) rated it very good and 53 (36%) rated it good.

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Taking into account academic performance, very few respondents, 5(3.4%) disagreed and 2 (1.4%) strongly disagreed that online learning would not in any way improve their academic performance. However, majority of the respondents 84 (56%) and 57 (38.5%) strongly agreed that online learning would improve their academic performance. Similarly, Adarkwa (2018) reported that only a few of the students believed that their outcome in the online learning would be better than face-to-face approach. Many attributed the negative effect on their outcome to the difficulty they had with internet access and network challenges.

With regards to whether students preferred online learning to the old conventional face-to-face method of learning, Olayemi, et al. (2021) reported that most of the students, 64 (43.2%) disagreed with the idea while 53 (35.8%) agreed. On the other hand, 15 (10.1%) strongly agreed and 16 (10.8) strongly disagreed with the idea that online learning was preferred to face-to-face method. The above responses revealed that some students are bound to perform better than others in the era of Covid-19 depending on their choice of learning method. Almost similar to the views expressed over the preference of online learning to the conventional method, students overwhelmingly expressed mixed feeling concerning how easy it was to use online learning facilities. A large number of respondents, 61 (41.2%) agreed and 59 (39.9%) disagreed that it was much easier using online learning facilities over face-to-face.

In addition, Bali and Liu (2018) examined student perception toward online learning and face-to-face among 107 participants. The result indicated that face-to-face learning was higher than online learning in terms of social presence, social interaction, and satisfaction. Also Kulal and Nayak (2020) studied the perception of teachers and students towards online classes. Data were collected through two separate questionnaires. The study revealed that students were comfortable with online teaching and were getting enough support from their teachers but they did not believe that online teaching will replace traditional teaching.

Whether online learning reduces a great deal of students' financial cost over the face-to-face conventional method, Olayemi, et al. (2021) found that 68(45.9%) respondents agreed that their cost of learning will be greatly reduced. Taking into account the reduction expenses, 35 (23.6%) respondents strongly agreed and the same number of respondents also 35 (23.6%) disagreed with the view. However, 10 (6.8%) strongly disagreed with the idea that online learning will reduce their financial expenses over the face-to-face learning method. Flexibilities are one among the features of online learning over the face-to-face conventional method. An overwhelming percentage of the respondents 78 (52%) agreed that indeed, online learning will provide lots of flexibility, this was followed by 35 (23.6%) respondents who strongly agreed as against 30 (20.3%) and 5 (3.4%) who disagreed and strongly disagreed respectively that online learning would not provide them any form of flexibility over the conventional learning method. Paying attention to flexibility, Ogbonnaya, Awoniyi, and Matabane, (2020) found that 121 pre-service teachers representing 82% reported that they enjoyed online learning as they had a choice of places to learn which was compatible with their learning needs. In addition, pre-service teachers indicated that they could go back and play vidoes sent as well as go back and go over charts discussed.

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With the outbreak of Covid-19 pandemic students were restricted to their homes. The effect of the lockdown reflected in the responses of the students where majority of the respondents 91 (61.5%) agreed and 47 (31.8%) strongly agreed to the view that online learning will go a long way in remediating the effect of the lockdown on students. Only a very few of the respondents 6 (4.1%) and 4 (2.7%) disagreed and strongly disagreed respectively to the above view.

Students' readiness towards online learning

Readiness or preparedness of student to respond to changes and adaptation to online learning, as a new way of delivering lessons is a step towards the right direction. Meanwhile, readiness of students, facilitators and technology, is one of the most significant aspect in this context. Readiness entails students' competence, confidence in using technological tools and the ability to participate in self-directed learning (Smart & Cappel, 2006).

It is an undeniable fact that pre-service teachers sound knowledge in ICT is a prerequisite for involvement in any form of online learning. The study conducted on student readiness for online learning by Olayemi, Adamu, and Olayemi, (2021) revealed majority of the respondents 79 (53.4%) agreed to having a sound knowledge of ICT, and 47 (31.8%) respondents strongly agreed to the same view. Also 17 (11.5%) and 5 (3.4%) disagreed and strongly disagreed respectively for not having sound knowledge of ICT. Pre-service teachers' knowledge of the internet is another very crucial issue since online lessons are sent by the facilitators and received by the students through the use of internet. With regards to the knowledge on the use of internet, 73 (49%) of the respondents agreed while 55 (37%) strongly agreed that they have good knowledge of the internet and online learning. Also, 16 (10.8%) and 5 (3.4%) disagreed and strongly disagreed respectively that sound knowledge of the internet alone, was not enough to effectively participate on online learning platforms (Olayemi, et al. 2021).

For the importance of general web browsing and surfing, a large number of the respondents, 80 (54.1%) agreed, 44 (29.7%) strongly agreed, while 20 (13.5%) disagreed that it was not a problem for them as far as online learning is concerned. In addition, 4 (2.7%) strongly disagreed with the idea.

A sound electronic device is the gateway to any form of online learning. This is because online learning requires the use of an ICT device be it a computer or a simple hand held smart phone that is fully equipped with the necessary softwares. Olayemi, Adamu, and Olayemi's (2021) results surprisingly revealed that most of the students, 74 (50.0%) agreed to having a sound electronic device, this was followed by 59 (39.9%) respondents who strongly agreed to having an electronic device. A few number of the respondents 10 (6.8%) and 5 (3.4%) however disagreed and strongly disagreed about having a sound smart phone for online learning. In similar study, Ogbonnaya, Awoniyi, and Matabane (2020) reported that 134 pre-service teachers representing 92% used smartphones; 74 representing 51% used laptops; 10 representing 7% used tablets; and only five (3%) used a desktop computer to connect to the internet for their online learning.

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Online learning requires good access to internet for the student to be able to benefit fully. All learning materials are sent and received through the internet; hence, internet becomes a prerequisite for online learning. For good internet, 75 (50.7%) of the respondent agreed to having access to good internet broadband and 36 (24.3%) of respondents disagreed to having access to internet broadband (Olayemi, Adamu, & Olayemi, 2021). Narh, Boateng, Afful-Dadzie and Owusu (2019) and Adarkwa (2020) also reported in their study that having access to internet broadband was huge challenge. The students interviewed explained that they chose to access internet midnight since it was effective as compared to day hours.

Ogbonnaya, et al. (2020) explored the readiness of pre-service to in digital literacy and use technological devices, their online learning experiences as well as their challenges. The study revealed that flexibility of online learning increased students' motivation to learn. However most of the pre-service teachers (105 - 71%), encountered challenges in learning online that were related to internet connectivity. The internet connectivity challenges ranged from a slow internet network connection to a complete internet network failure.

Taking into if account the availability of power for Information and Communication Technology (ICT) devices performed their functions optimally, Olayemi, Adamu, and Olayemi (2021), reported that majority of the respondents, 65 (43.9%) overwhelmingly disagreed with the availability of regular power supply needed for their online learning. However, 50 (33.8%) respondents agreed to having regular power supply during their online classes. This sets of students included those leaving in the urban areas and some of whom can afford to provide alternative means of power. Ogbonnaya, et al. (2020) also reported that pre-service teachers complained of erratic power supply as a challenge to their online learning.

One of the major problems students face in the use of online is related to distraction that may come either from environmental factors or internet related distractions like those from social medias such Facebook and WhatsApp. Whether the respondents will not be facing any form of distraction in their use of online learning platform, Olayemi, et al. 2021 reported that 73 (49.3%) of the respondents agreed while 39 (26.4%) disagreed. Also 33 (22.3%) and 3 (2.0%) of the respondents strongly agreed and strongly disagreed respectively. Similarly, Ogbonnaya, et al. (2020) explored pre-service teachers online learning experiences and challenges and found that majority of the pre-service teachers reported of interruptions from family members at home as a challenge for online learning. Moreover, Shetty, Shilpa, Dey and Kavya (2020) surveyed the attitude of the undergraduate students towards online learning during Covd19 crisis and reported that during online learning students were distracted by social media and technology related issues.

METHODOLOGY

Research Design

The study employed a descriptive survey research design. This type of design would assist to describe the characteristics that exist in the population but not to determine the cause-and-effect relationship. The justification for the use of the design was that it provided detailed

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description of pre-service teachers perception and readiness towards online learning as part of quality teaching and learning in colleges of education in Ghana.

Population

The target population for the study comprised three hundred and seventy-nine (379) level 200 undergraduate pre-service teachers pursuing Bachelor of Education in Junior High School and Upper Primary programmes in Akatsi College of Education. The level 200 pre-service teachers were targeted because they had successfully taken part in online teaching and learning for two semesters and therefore possessed the unique characteristics needed to serve as respondents for the study. The assessable population purposively selected comprised two hundred and twenty-three pre-service teachers.

Sample and Sampling Procedure

The sample selected consisted of two hundred and twenty-three level 200 pre-service teachers specializing in Bachelor of Education in Junior High School and Upper Primary prgrammes. All level 200 classes offering Mathematics, Science, Technical, Agricultural Science, and Upper Primary were purposively selected to form the sample. Level 200 teacher trainees were selected because they had taken part in the online learning for two semesters and could be able to share their views and sentiments about the online learning arrangements.

Instrument

A questionnaire was used for data collection. The questionnaire was divided into two areas namely students' perception towards online learning and students' readiness towards online learning in Covid-19. There questionnaire was divided into two parts. The first part of the questions assessed pre-service teachers' perception towards online learning. The second part of the questions assessed the respondents' readiness towards online learning based on 4-Likert scale format. Respondents were asked to indicate their level of agreement on perception about their readiness and perception on a four-scale (1 = strongly disagree, 2 = disagree, 3 =agree, 4= strongly agree). On the scale of 1 to 4, 2.5 being the median, when the mean is above 2.5, it implies the perception exists, but when the mean is below 2.5 the perception does not exist.

Data Collection Procedure

Permission was sought from the authorities of Akatsi College of Education having explained the purpose of the study. The researchers visited each class and explained the purpose of the study to pre-service teachers as well assured them about the confidentiality of the information they would provide. In all 230 questionnaires were distributed. Pre-service teachers spent 45 minutes to complete the questionnaire. All questionnaires were collected for analysis.

Data Analysis

Data was analysed using frequencies, percentages, means and standard deviations.

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RESULTS AND DISCUSSIONS

Table 4.1: **Subject of Specialization**

Subject	Frequency
Home Economics	50
Mathematics	35
Science	35
Technical	22
Upper Primary	81

Table 4.1 shows the pre-service teachers with their specialized areas in the Initial Teacher Education of Bachelor of Education programme who participated in the study. The Bachelor of Education junior high school option comprise Mathematics, Science, Technical and Home Economics. The Bachelor of Education primary option is the Upper Primary.

Research Question 1: What is the perception of students towards online learning platform?

Table 4.2: Pre-service teachers Perceptions towards Online learning

Perceptions	%*	M	SD
Usefulness of online learning	85	1.59	0.771
Easy to use	84	1.68	0.756
Improving digital creativity	54	2.41	0.945
Academic improvement	86	1.65	0.762
Preferred online learning over face-to-face method	96	1.30	0.596
At ease in using online learning	95	1.40	0.576
Reduction in financial cost	85	1.58	0.850
Provides lots of flexibilities	72	1.88	0.876
Remediate the challenges with Lockdown	51	2.33	0.928

Note. %*, Percentage of pre-service teachers who either 'agreed' or "strongly agreed' their perceptions towards online learning

The percentage rank order in Table 4.2 revealed that pre-service teachers preferred face-to-face lessons to online method, 96% of the pre-service teachers preferred face-to-face lessons to online method (mean = 1.30, SD = 0.596). The findings of our study are consistent with the study conducted by Olayemi, et al. 2021 which reported that majority of the students preferred online learning to the old conventional face-to-face method of learning. Also consistent with our study is the study of Bali and Liu (2018) which compared the perceptions of students about online learning and face-to-face regardless of the course delivery method and the online environment which reported that face-to-face learning perception was higher than online learning terms of social presence, social interaction, and satisfaction.

Concerning the facilities of online learning, 95% of pre-service teachers disagreed that it will be very much of ease using online learning facilities over face-to-face. (mean= 1.40, SD= 0.576). The findings of our study are not consistent with the study conducted by Olayemi, et al. 2021 which reported that 61 (41.2%) agreed that it was much easier using online learning facilities over face-to-face.

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Majority of pre-service teachers (85%) do not believe online teaching is useful to them (mean = 1.59, SD= 0.771). The findings of our study are in line with that of Olayemi, et al. (2021) which found that 81 (54.7%) strongly agreed, and 59 (39.9%) agreed that online learning was useful to them in the era of the Covid-19 pandemic.Whether, using online teaching will help improve their digital creativity, the finding of our study revealed that 54% of the pre-service teacher agreed that using online learning will improve their digital creativity (mean = 2.41, SD = 0.945). It can be deduced from Table 4.1 that pre-service teachers do not have favourable perceptions towards online learning for sustaining their academic interest and development.

The finding of our study that online learning will improve pre-service teachers' digital creativity is consistent with the study Olayemi, et al. 2021 conducted which reported that 85 (57.4%) teachers agreed that their digital creativity would be improved. The finding of our study which reported that (51%) pre-service teachers agreed that online learning will go a long way in remediating the effect of the lockdown on students is consistent with the findings of Olayemi, et al. 2021 reported that 91 (61.5%) of students agreed to the assertion. In addition, our finding is in line with that of Olayemi, et al. 2021 where majority of the respondents agreed that online learning would go a long way to remediating the effect of the lockdown on students.

The finding of our study also revealed that majority (86%) of the pre-service teachers disagreed that online will in any way improve their academic performance. This finding contradicted the study conducted by Olayemi, et al. 2021 which reported that majority of the respondents agreed that online learning will improve their academic performance.The results in Table 4.1 showed that pre-service teachers have negative perceptions towards online learning. The findings are in line the with the results of the study conducted by Abbasi, Ayoob, Malik and Memom (2020) which reported that students have negative perceptions towards e-learning. However, our findings contradict the study of Huda, Wahyuni and Fauziyah (2020) which revealed that majority of students have good perceptions towards online learning.

Research Question 2: How ready are students' towards using online learning platform?

Table 4.3: Pre-service Teachers Readiness Towards Online learning

Readiness	%*	M	SD
Knowledge of ICT	63	2.07	0.890
Knowledge of Internet	72	1.99	0.849
Knowledge in general web browsing/surfing	77	1.90	0.854
Sound Electronic Device	72	1.86	0.919
Access to good internet	93	1.43	0.632
Regular power supply	84	1.61	0.762
Distraction	93	1.40	0.636

Note. %*, Percentage of pre-service teachers who either 'agreed' or "strongly agreed' their readiness towards online learning

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The results in Table 4.3 showed that 93% of pre-service teachers indicated that they did not have access to good internet broadband to get them connected to an online learning class (mean= 1.43, SD = 0.632). The finding of our study is consistent with the results of Ogbonnaya, et al. (2020) which indicated that most of the pre-service teachers (105 - 71%), encountered challenges in learning online that were related to internet connectivity. The internet connectivity challenges ranged from a slow internet network connection to a complete internet network failure. The findings of our study is however, not consistent with the results of the study conducted by Olayemi, et al. 2021 which indicated that majority of the pre-service teachers had access to good internet broad band that supported their online learning. Concerning whether the respondents would not face any form of distraction in online learning, 93% of the respondents disagreed with the statement (mean = 1.40, SD = 0.636). This implies that pre-service teachers were distracted in various forms when they were engaged in online learning at home. The findings of our study concerning distraction during online classes is in line with the study of Ogbonnaya, et al. (2020) which reported of interruptions from family members at home during online classes.

The finding of our study also revealed that 84% of respondents agreed that they faced problems with regular power supply to support their online learning. From previous studies, Atta-Obenga and Dadzie (2020) reported of erratic power supply in Ghana, only 4% of pre-service teachers reported that power outages were a challenge for online learning. The finding of this study is not consistent with our study which revealed that 84% complained about intermittent power supply which affected their online learning.

CONCLUSIONS

The evidence available from the findings of this study provided the basis for a number of conclusions to be made.In the first place, pre-service teachers preferred traditional face-to-face as opposed to the online learning although the online learning is a good initiative. Secondly, pre-service teachers also believed that online learning would help them improve on their digital creativity. Thirdly pre-service teachers believed that online system could remediate lockdown challenges of teaching. Fourthly, from the results, pre-service teachers countered challenges concerning having access to good internet broadband that could get them connected to an online learning class. They believed that online learning would remediate their stay home due to inadequate space to accommodate all students on campus. Last but not least it can be concluded that pre-service teachers could have negative perceptions towards using online learning and were also not ready for online learning.

Implications of finding and Recommendations

The aim of this study was to assess the perceptions and readiness of pre-service teachers towards online learning due to the COVID-19 pandemic coupled with the infrastructure deficit in the Colleges of Educations. The findings revealed that majority of pre-service teachers did not have access to good internet broadband to get them connected to an online learning. As a result, pre-service teachers preferred traditional face-to-face lessons to online lessons. We therefore recommend that Colleges of Education should make frantic effort and secure learning management system that will allow tutors to use Asynchronous Teaching means that allows

students to learn at any time because tutor have provided learning material for pre-service teachers to assess and learn. This will go a long way to drastically reduce the large amount of internet bundles pre-service teachers used during synchronous teaching. In addition, it will promote self-spacing (flexibility) nature of online learning in order to increase pre-service teachers' motivation and satisfaction.

Analysis of the results showed that pre-service teachers preferred traditional face-to-face as opposed to the online learning which is fraught with a lot of challenges. We recommend that due to the nature of the initial teacher education(ITE), the Government of Ghana and other stakeholders make frantic effort to close up the infrastructural deficit to allow students take part in face-to-face teaching and learning.

The study also aimed at informing Colleges of Education to acquire learning management systems whose facilities are much easier for pre-service teachers to use during online classes. Meanwhile, majority of pre-service teacher reported that the online facilities were not very much of ease to use. We therefore, recommend that Colleges of Education acquire interactive learning management system that have facilities for pre-service teachers to easily use to facilitate their online learning.

The results of the study revealed that pre-service teachers were optimistic that using online teaching would help improve their digital creativity. We recommend that Colleges of Education in Ghana should as a matter of necessity improvise means through which knowledge delivery and general learning activities can be achieved seamlessly to allow pre-service teachers apply apply their ICT knowledge to improve their creativity in carrying out online learning presentations.

Implications for Research

The study aimed at informing the Ghana Ministry of Education and Ghana Tertiary Commission of Ghana of the Ministry of Education about the perceptions and readiness of pre-service teachers towards the online teaching and learning introduced by Colleges of Education due to inadequate infrastructure to accommodate pre-service teachers coupled with the outbreak of Covid-19 pandemic. The study also sought to encourage stakeholders of education in Ghana to see the need invest in infrastructure to enhance quality teaching and learning as well as equip pre-service teachers with special skills and knowledge to interpret the basic school curriculum during their Supported Teaching in Schools (STS). The research also aimed at adding to the existing literature by serving as a firm base for future researchers who would like to endeavour into this area.

REFERENCE

Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I. (2020). Perceptions of students regarding e-learning during Covid-19 pandemic at a private medical college. *Pak Journal of Medical Science, 236*, 57-61.

Adarkwah, M. A. (2020). "I'm not against online teaching, but what about us?": ICT in Ghana Post Covid-19. *Education and Information Technologies, 26*, 1665–1685.

Anyorigya, D. A. (2020). COVID-19: Halt challenge-ridden online learning in universities-NUGS to Government. Retrieved July 10, 2021 from https://citinewsroom.com/2020/04/covid-19-halt-challenge-ridden-online-learning-in-universities-nugs-to- government/.

Bali, S., & Liu, M. C. (2018). *Students' Perceptions toward online Learning and Face-To-Face Learning Courses*. *Journal of Physics, 1108,* 1-8.

Bao, W. (2020). COVID -19 and Online Teaching in Higher Education: *A Case Study of Peking University*. *Human Behavior and Emerging Technologies, 2* (2), 113-115.

Branch, M. R. & Dousay, A. T. (2015). *Survey of Instructional Design Models, Association for Educational Communications and Technology (AECT*). USA; Bloomington, Indiana.

Cromwell, A. (2020). Education Ministry set to release online learning platform for Senior high schools. Retrieved on July 12, 2021 from https://www.myjoyonline.com/news/national/education-ministry-set-to-release-online-learning-platform-for-senior-high-schools/

Goh, P. S., & Sandars, J. (2020). A Vision of the use of Technology in Medical Education after TheCOVID-19 Pandemic. MedEd Publish, 9(1), 49. https://doi.org/10.15694/mep.2020.000049.1 (Hrastinski, 2008).

Huda, N., Wahyuni, T. S., & Fauziyah, D. F. (2020). Students' Perceptions of Online Mathematics Learning and its relationship towards their achievement. Advances in Social Science, Education and Humanities Research, volume 529. Proceedings of the International Conference on Engineering.

Josep, G. (2020). Reasons why online learning is the future of education. Retrieved, July 26, 2021 https://www.educations.com/articles-and-advice/5-reasons-online-learning-is-future-of education-17146.

Kharve, D., & Gogia, A. (2016). E-learning: Student's Perception in Developing Countries like India. *Advances in Computer Science and Information Technology*, *3*(5), 389-395.

Kulal, A., & Nayak, A. (2020). *A Study on Perception of Teachers and Students Toward* Online Classes in Dakshina Kannada and Udupi District.

Larbi-Apau, J., Sampong, K. & Kwofie, B. (2020). *Barriers to Online Learning Adoption in Higher Education.* Retrieved July 27, 2020 form https://www.university worldnews.com/post.php?story=20200506200743715

Li, C. & Lalani, F. (2020). The COVID-19 pandemic has changed education forever. This is how. Retrieved July 26, 2020 from https://www.weforum.org/agenda/2020/04/ coronavirus-educationglobal-covid19-online-digital-learning.

Morrero-Guerero,A., Aznar-Diaz, I., Caseres-Reche, P. C., & Alonzo- Garcia, S. (2020). E-Learning in the Teaching of Mathematics: An Educational Experience in Adult High School.

Naa, A. M. (2020). Pre-Service Teachers' Perception of Online Teaching and Learning during the COVID – 19 Era. *International Journal of Scientific Research and Management 8* (10), 1649-1662.

Narh, N., Boateng, R., Afful-Dadzie, E., & Owusu, A. (2019). Virtual platforms: Assessing the challenges of e-learning in Ghana [Paper presentation. The Twenty-fifth Americas Conference on Information Systems, Cancun, Mexico.

Ogbonnaya, U. I., Awoniyi, F.C., & Matabane, M. E. (2020). Move to Online Learning during COVID-19 Lockdown: Pre-Service Teachers' Experiences in Ghana. *International Journal of Learning, Teaching and Educational Research, 19* (10), 286-303.

Olayemi, O. M., Adamu, H., & Olayemi, K. J. (2021). Perception and Readiness of Students' Towards Online Learning in Nigeria During Covid-19 Pandemic. *Library Philosophy and Practice (e-journal)*, 5051.

Shetty, S., Shilpa, C., Dey, D., & Kavya, S. (2020). Academic crisis during COVID 19: Online classes, a panacea for imminent doctors. Indian J Otolaryngol Head Neck Surg. https://doi.org/10.1007/s12070-020-02224-x Yang & Li, 2018).

Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education*, 5, 201-219.

UNESCO (2020). COVID -19 Educational Disruption and Response. Retrieved on July 29, 2021 from https://en.unesco.org/covid19/educationrespons.