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Online Instructional Experiences, the Challenges of Students and Tutors of Some Selected Colleges of Education in Ghana

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Abstract:

Interest of Students is the bases upon which any effective online learning hinges. It is for which reason, management of the institution designed courses and activities that allow students to effectively practice, work together on relevant projects to facilitate their individual learning. In emerging institutions like the Colleges of Education, inclined towards professional development, online education is the medium to enhance access, improve standards and enhance labour productivity by overcoming space and work limitations. The study looked at the conduct on online teaching in Ghana and revealed that the systems for online teaching and learning are a new phenomenon. Again, student-teachers are saddled by poor internet connectivity, high cost of data in an emergency learning environment. Despite these challenges, a significant proportion of student-teachers would still choose online learning as they work and earn certificates. In view of this, the study recommends for policy in this area to institutionalize online education into the curricula of all professional institutions of higher learning in Ghana, including the various College of Education in Ghana.

Keywords: Online, instructions, learning experiences, Microsoft teams and colleges of education

1. Introduction

Colleges of education in Ghana are the various tertiary institutions that used to offer Diploma in Education programmes leading to the award of Diploma in Basic Education Certificate in Ghana. Recently the institutions have been accredited to peruse various courses of study that would lead to the award of Bachelor of Education Degrees in the country.

E-learning with ICT acts as virtual universities through which learning become easy and flexible in oriented institutions in the course of time (Nawaz and Kundi, 2010). More importantly in the year 2020, e-Learning has become the only way for education in the wake of the COVID-19 pandemic which first broke out in Wuhan, China. The spread of this pandemic has challenged many traditional systems including teaching and learning across the world. A response to the ravaging COVID-19 is the observance of social protocols to reduce the surge of the scourge (WHO, 2020). As a response to life in the new-normal, online education also known as cyber schools or distance learning (Kotoua, Ilkana & Kilio, 2015) has become the norm to access learning in a virtual environment. Online education is a classroom on the internet that engages and assists students to study in their own free time (Swan, Shea, Fredericksen, Pickett, Pelz, & Maher, 2000). Among the benefits of online education includes the opportunities for increased student-enrolment, improved access and for continuous professional development for the working class (Asogwa, 2006; Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, & Huang, 2004) and done primarily through national policies (Quality Assurance Agency [QAA], 2004). In the United Kingdom for instance, the QAA enhances innovation in open and distance learning (ODL) by ensuring that institutions are guided by a code of practice which underpins collaborative provision and flexible distributive learning (including e-learning). In Sub-Saharan Africa, online education takes the form of distance education with modular and sandwich options for weekend, evening and part-time instructions options (Tackie Larkai, 2014).

According to UNESCO (2007), online education in Ghanaian universities is still not perfect enough and most students prefer traditional systems to e-education. However, in terms of access to online education in the sub Saharan Africa, Ghana is rated as one of the best countries for online education though the process is still in its infancy (Kotoua, Ilkana & Kilio, 2015; Tagoe, 2012). Indeed, Tagoe (2012) has acknowledged that e-learning has improved in Ghana with adequate infrastructure and network connectivities in most universities. In 2013, the National Accreditation Board (NAB) in its annual report on programmes mounted by higher institutions, revealed a total of 170 tertiary institutions had mounted online programmes in Ghana. Nine out of these institutions were offering distance programmes mainly from four public and five private tertiary institutions. However, the number had dwindled as at March 2016 to eight. This includes four public and four private institutions (NAB, 2015; 2013).

Even though universities in Ghana continue to increase access to higher education using the e-learning platforms, there is no specific national policy on e-learning to facilitate the accreditation and standardization of e-courses (Tanye,

2017). Other challenges bedevilling the introduction of online learning in the country include the development and implementation of strategies that are framed from the global competitive market (Sahay, 2004); difficulty in bridging the gap between technology and teachers existing pedagogy (Zhoo & Bryant, 2006) and high dropout ratio (Shea & Bidjerano, 2014). In terms of training, the mass of students and lecturers lack awareness about online resources, low computer literacy level and high cost of data to support e-learning (Folorunso, Ogunseye, & Sharma, 2006). Again, many of the studies on online teaching and learning in Ghana have centred on institutions focusing on lecturers leaving the students (Gyampoh, Ayitey, Fosu-Ayarkwah, Ntow, Akossah, Gavor & Vlacholoulos, 2020; Tanye, 2017; Kotoua, Ilkana & Kilio, 2015).

Colleges of Education are inclined towards professional development but there is no policy on online education. Secondly, the Colleges of Education is transitional institution with weak structures and systems (Transforming Teacher Education in Ghana, 2016). Despite its weak structures, in the wake of the COVID-19 pandemic, the colleges also changed track from conventional face-to-face to the novel online instructional design to sustain practices. In the process, several platforms were adopted by the Colleges of Education to deliver emergency remote teaching through instructional designs to student-teachers across the country. To improve practice, several interventions were designed to equip tutors of College of Education in the country with the know-how. There were some hands-on online capacity training offered by facilitators on Microsoft Teams and as well as in-service training for the ICT Unit and supervisors of the Colleges of Education tutors to augment their skills. However, there was little support for student learning to offer them with hands-on experience to access online instructions for the rest of the first semester of the 2019/2020 academic year.

This study sought to explore the challenges that might affect student who leave in the peri-urban and rural districts of Ghana with associated challenges of internet connectivity to better improve learning outcomes in Ghana. The assumptions for the study were that addressing students' feelings of isolation and loneliness will ultimately better their understanding, reduce drop-out of online courses and programs and eventually improve the competitiveness for higher education (Bawa, 2016). Secondly, Quality Framework in online learning is enhanced if students have access to learning resources, institutional support systems and instructional designs (Baldwin, Ching, & Hsu, 2018).

1.1. Objectives of the Study

The research seeks to achieve the following objectives:

- Examine the location of students of selected Colleges of Education in the Eastern Region of Ghana.
- Assess the training in ICT they have to be able to undergo online learning
- Investigate into the resources available to the students in the peri-urban and rural districts to support online instruction
- Ascertain other challenges might affect students' participation in online instruction across their current locations in the Region.

2. Research Questions

- Where are students of the Selected Colleges of Education in Eastern Region located across the country for online teaching?
- What training in ICT do they have to be able to undergo online learning?
- What resources are available to students in the peri-urban and rural districts to support online instruction?
- What other challenges might affect students' participation in online instruction across their current locations in Ghana?

3. Literature Review

3.1. Towards a Theory for Online Education

Early online educators began investigating ways to develop community of online education when Swan and her colleagues published some of the earlier research on learning communities in online courses and found out that consistent and transparent course design; regular and constructive instructor interaction with students, and active discussions influence greatly the success of online courses (Swan et al., 2000). Further, they argue that these three factors in turn help lay the foundation for knowledge building communities. Two year later she singularly investigated course design features and student immediacy behaviours that influence the social development of learning communities (Swan (2002) and identified the importance of clear course structure, interactive instructors, and dynamic discussions as well as students' verbal immediacy behaviours - affective, cohesive, and interactive as some necessities that could generate a sense of community among classmates.

Over the past decades, distance education has become the norm in which people improve their knowledge through formal education system while they work (Seaman, Allen, & Seaman, 2018). At the same time, the level of attrition rate associated with online learning has been higher than traditional face-to-face courses (Angelino, Williams, & Natvig, 2007) due to the feelings of isolation and loneliness associated with the programme (Ludwig-Hardman & Dunlap, 2003). But many researchers have noted that online education could be as effective as face-to-face education (Bernard et al., 2004; Nguyen, 2015) as learners in online environments take control of their own learning and shift toward competency-based curricula which emphasizes learning outcome, not the process, of education using internet technologies (Mushin, 2008).

3.2. *The Ghana National Effort at Online Education*

Ghana as a nation has made strides towards the effective use of ICTs in education with its ICT in Education Policy in 2008 after the first policy called ICT for Accelerated Development (ICT4D). The ICT in Education Policy has an overall goal to enable graduates from Ghanaian educational institutions—formal and non-formal to confidently and creatively use ICT tools and resources to develop requisite skills (ICT for Education Policy 2008). This has been amended and revised into the Education Strategic Plan for 2010-2020. At the pre-tertiary level of education, the Ministry of Education in Ghana established an Agency called Centre for National Distance Learning and Open Schooling (CENDLOS) with the role to reinforce Open and Distance Learning (ODL) in Ghana. CENDLOS as it role demands, has produced and distributed content on various subjects ran in Junior High schools and Senior High schools and not the tertiary institutions.

The devices used for this purpose include personal computers, CD ROMs, television, personal digital assistants (PDAs), MP3 players and mobile phones. Communication technology enables the use of Internet, e-mail, discussion forums, collaborative software, classroom management software, team learning systems, intranet, extranet, Local Area Network (LAN), Wide Area Network (WAN), audio and videotape, satellite and interactive television lectures, satellite-delivered learning, virtual educational networks, satellite downlinks, computerized diagnostic assessment, competency certification and electronic portfolios (Asogwa, 2006).

3.3. *Emergency Remote Education in a College Setup: A Conceptual Framework*

Today, there is commonality of agreement among researchers that there exist a relationship between a sense of community and perceived learning with online courses (Baturay, 2001, Ni & Aust, 2008). In view of the above, online educators have found the foundations to developing online learning communities for students with (1) consistent and transparent course design, (2) regular and constructive instructor interaction with students, and (3) active discussions and influence in online environment (Swan, 2001). In a similar manner, Rovai (2001) agrees that developing a sense of community and providing regular feedback to learners can enhance online community for learning and lastly improved teacher presence is crucial in developing a community in online courses and connectedness (Swan & Shea, 2005).

With the advent of COVID pandemic across the world, e-learning became the option by which teaching and learning could continue to prevent the spread of the virus. Several e-learning platforms are being adopted for both synchronous and asynchronous lessons including Google Classroom, Edmodo, Moodle, WhatsApp, Telegram and Zoom. The advancement in virtual learning has been made easier in the 21st century with the development of micro-processor to personal computers, android technology platforms for electronic learning (e-learning), mobile learning (m-learning), and the digital learning (d-learning) (Besak, Wotto & Be' langer, 2018). The focus for online learning has largely grown from distance education for professional learning communities for workers (DuFour & Eaker, 1998) to community of learning for higher institutions (Gannon-Leary & Fontainha, 2010).

4. Research Design

In view of the social distancing protocols, this qualitative study adopted the telephone interview approach to reach out to students to examine their lived experiences in an online learning environment. The interview guide was designed to investigate a range of support systems including educational, managerial/institutional support, technological, communication design, ethical, evaluation and organizational that are available to them during the online teaching and learning environment. Through the iterated process of reading and rereading of the interview reports, the narratives from interviews were transcribed based on common themes and views interrogated (Van Manen, 1995).

5. Methods and Sampling Procedure

The study adopted the purposive sampling to reach out to students who are reading various courses at the selected Colleges, and have never taken courses in ICT but had to study in an online environment for the first time in the COVID-19 period. Each interview session lasted for about 15 to 20 minutes. In all, the sampling population for the study included all level 100 and 200 students at the Selected Colleges of Education, reading the various courses. In all 200 Students made up of 100 Male and 100 Female were contacted. The contact numbers of the students taken from the telegram and WhatsApp platforms from which they have registered for courses. They were contacted by the tutors involved in the study by phone, the purpose of the study read to them to ascertain their consent. In all, sixty students were reached within a period of two weeks set aside for the interview.

6. Data Analysis

The researchers coded each message based on category of indicators defined in the Community of learning framework as well as the meaning of that message in the context of discussion. The first author and a research assistant analysed the transcripts by applying a negotiated coding approach (Swan, 2002). Transcript analysis used here is a research technique for making replicable and valid inferences from data to their context (Krippendorff, 1980). Consistent with the research methodology, both manifest and latent content analysis strategies were applied to code and explore posting patterns of social presence, teaching presence and cognitive presence.

7. Ethical Issues

To empower and protect students involved in the study, they were assured of anonymity and confidentiality (Heath, Crow & Wiles, 2004) by introducing the purpose of the study by the tutors engaged in the study by introducing the content of the interview guide to them and seeking for their availability and readiness to respond to the interview. Those who obliged were later called and interviewed. In all 200 students from the selected Colleges of Education, perusing various subjects for the award of Bachelor of Education Degrees, accepted to take part in the interview. Each participant was promised of their anonymity for their views expressed in the study.

8. Study Area

The selected Colleges are affiliated to the various Universities in Ghana and runs programmes designed by the mentor institutions for student. Some of these courses taught in the College include Mathematic and ICT Education, Science Education, Physical Education, Performing Arts Education, Religious and Moral Education and Social Studies Education. The mode of instruction for student teachers in Ghana is conventional face-to-face teaching and learning.

Again, the Colleges per their mandate, have not mounted online programmes for professional development. In the wake of the pandemic, there was the need to further engage students by completing the 2019/2020 academic year in an online environment.

9. Findings

9.1. Location of Students in Ghana for Online Instructions

To determine, the districts from which our students are located for the online lessons, the researchers elicited their usual region, district and specific town/village where our students were located and participate in the online lessons. The results of the interviews revealed that students were spread in 10 (62.5 percent) of 16 regions across the country. In specific terms, 57 percent of students were located in the Eastern region in which the Colleges are situated, 6 percent from the Greater Accra region, 5.5 percent from Ashanti region and the least was 0.5 percent from North East and Western regions of Ghana. In terms presence in districts across Ghana, it was revealed that students from the Colleges of Education, were spread in 48 districts (22.2 percent) out of the 216 district assemblies in Ghana. In all, both female and male students were readily available as 50 percent were reached while male counterparts were 50 percent.

9.2. Challenges Facing Students in An Online Learning in the Selected Colleges

In terms of educational challenges the students were facing in the online school, 51 percent students affirmed the College has not mounted any online education programme on campus to equip them in the skills and ethics for online education, 56 percent affirmed their participation in the online instructions by taking part in all 5 five courses. Forty-two (42) percent admitted they are unable to join in view of cost and access to internet connectivities with only 2 percent unable to respond to the question on participation. Out the number, 51 percent are able to join in 3 to 5 courses being taught online while 42 percent are able to join 3 to 4 out of 5 courses mounted for the online school. On the question of gadget used, 94 percent of student-teachers do so using android phones while 5.5 percent use laptops and palm tops.

The second area assessed was management of online lessons. From the interview transcripts, 92.2 percent of students admitted tutors stick to times designed for instructions. However, 91.1 percent of students bemoaned the lack of accessibility to library and other resources across their locations in Ghana to support online learning. To further enquire about technological constraints facing students, it became obvious that several locations in Ghana lack internet connectivities and suffer high of bandwidths. For instance, it was revealed that 91 percent of students were challenged by poor internet connectivities while 9.4 percent of them use GSM phones because of poor network.

The next prerequisite of interest to the researchers was to ascertain the level of learning support systems available in the peri-urban and rural districts to enhance online learning particularly now that students have greater responsibility to own their learning. It became evident that parents are facing the brunt of funding the cost of data with 80 percent of students alluding to this claim. Another 10.5 percent of students said, they work to buy data to support the lessons while another 9.4 percent said they borrow data from the network companies such as MTN and VODAFONE.

Beyond social support systems, the researchers wanted to ascertain the impact of the emergency remote training sessions that was offered to tutors prior to teaching in the online environment. From the transcripts of the interview, 82.2 percent student-teachers affirmed tutors are doing well in their delivery while 17.7 percent said some tutors are not doing well. To ascertain the validity of this claim, another question on ethical issues were asked to determine the veracity of the claim. From the transcripts, 94.4 percent of students said lessons were designed to suit their level and their situation with right illustrations. In terms of submission of lessons, same percentage admitted they had ample time to submit and none complained of suffering from intimation by tutors regarding late submission of assignments.

The main assumption was that with effective instructional design, students would personalize learning and improve the outcome of the emergency remote learning. To test this assumption, students were asked whether they would want online teaching as an option for learning. The results were interesting as 93.8 percent interviewed responded in the negative with only 6.1 percent agreed in the affirmative by arguing that the approach affords them the '*opportunity to work and earn certificate at the same time*'.

The last proposition was to examine the kind of institutional challenges that generally affect learning by students in an online environment in the selected Colleges of Education. On this score, 86 percent of students said there was little or not enough support from the institution for their online learning. Only 13.3 percent agree the college has done so *by taking*

them through the Microsoft teams. Over seventy-eight (78.8) percent of students have been provided with links to register to access materials from Microsoft teams Moodle platform so far. In terms of quizzes, 56.6 percent of students had taken quizzes almost two months of instruction online. 81 percent of students said they had taken assignments and short-answer exercises during the period using the Microsoft teams, Google Classroom and Telegram. The dominant platform used to reach students were Telegram and Google Classroom with 98.9 percent and 83.3 percent respectively. Asked for students to rank the challenges facing them in the manner of severity, the following responses were proffered: poor network 42.7 percent, high cost of data, 32 percent and lack of android phones for learning 25 percent respectively were adduced.

10. Discussion of Findings

Online education has several advantages including lessons taught being available online throughout, accessibility to materials both online and offline, the reusability of materials by both tutors and students, the opportunity for collaborative learning and access to rich information from the global perspective to transform teaching and improve learning outcomes. To be successful, the need ICT infrastructure and training in information management are perceived to be the cornerstone for implementation of any online education programme (Raab, Ellis and Abdon, 2001). Others include facilitates for e-learning technologies, such as a Local Area Network, internet and computers to increase access to mobile technology (Sife, Lwoga and Sanga, 2007).

It is revealing to that female students in Jackson College of education have been responsive with increased participation in online lessons than their male counterparts. These developments have now enhanced the confidence of the female students in the selected Colleges of Education, to see opportunities in their abilities. It is instructive to note that the two students from the remotest villages interviewed were female. These developments support the call to emphasise equal participation for both gender in the activities of the institution. These development support the assertion by Swan (2002) that students who perceived high levels of content showed high levels of interaction because they were impressed with the instructional process. In view of the high level of motivation showed in the instructional design, students exhibited high of participation despite the high cost of bandwidths for online education. This support the first assumption that addressing students' feelings of isolation and loneliness will ultimately better their understanding, reduce drop-out of online courses and programs and eventually improve the competitiveness for higher education despite challenges of implementation (Bawa, 2016).

Again, the absence of physical and online resources to support students in the peri-urban and rural areas of Ghana has revealed the nakedness of education delivery in the country. The absence of these is an affront to quality education and access as it denies student-teachers the opportunity to do independent studies after lectures online. Again, it denies the students the opportunity to verify and search for information on their own to improve upon learning outcomes. This development affirms the sad story of inadequacy of infrastructure in many areas to support e-learning implementation success in many institutions in Africa (Aduke, 2008; Mutula, 2002). For instance, in Nigeria the non-availability of internet access in some tertiary institutions affects access and adoption of e-learning opportunities in Africa (Aduke, 2008) and, suggests governments should make internet connectivity a priority for higher education to be able to leverage on the promises and opportunities ICTs present. The absence of this essential commodity particularly in Ghana, affects the progress made by some universities to integrate and leverage on the opportunities offered by online learning (Awidi, 2008). It is instructive to know that despite the challenges of learning of the students of the selected Colleges, the issue of location and absence of support systems do not deter them for working and earning certificate at the same time. These development supports the second assumption that online learning is enhanced if students have access to learning resources, institutional support systems and instructional designs (Baldwin, Ching, & Hsu, 2018).

11. Conclusion

Student satisfaction is an essential element in an online learning environment. It is for which reason, educators design course activities that allow students to effectively practice, work together on relevant projects to own their learning. In emerging institutions like the selected Colleges of Education, which is much inclined towards professional development, instructional designs must be devoid of space-specificity to enhance professional development and improved labour force. These were the fundamentals upon which distance education was birthed to improve standards through education while working for the labour force. The introduction of some of these measures, would mean situations of pandemics such as COVID-19 would only bestow benefits rather than shifting and ravaging systems as we see today.

In view of the above, the study recommends that the regulatory bodies such as the National Council for Tertiary Education and National Accreditation Board must ensure national policies are designed to inculcate the institutionalization of online education programmes into curricula professional institutions in Ghana.

For successful role out of online education in professional institutions successful, the government through the appropriate ministries and agencies must ensure improved internet connectivities across the lengths and breadths of the country to take advantage of this model of education.

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