Coronavirus Pandemic and Online Teaching/Learning of Home Economics in Tertiary Institutions in Akwa Ibom State, Nigeria

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ABSTRACT

The deadly and infectious disease Corona Virus also known as Covid-19 has deeply affected the global economy. Generally, Nigeria's education sector is not adapting, and is expected to struggle on that front for the foreseeable future. However, the consequential socio-economic burden will be borne disproportionately by students in public schools, as compared to those in private schools. While several private schools have begun to initiate distance learning programs, and taking advantage of the myriad of ICT-learning opportunities provided by the international community, the government limited by funds and persistent deficiencies in planning, is yet to announce any official plans for providing distance-learning opportunities, especially for public schools. The implication being that these students in public schools currently have no formal learning plans and could be missing learning altogether. The focus of the paper is on Coronavirus Pandemic and Online Teaching/Learning of Home Economics in Tertiary Institutions in Akwa Ibom State Nigeria. It argued that conventional strategies of teaching are not adequate for teaching and learning Home Economics during the pandemic because of the lockdown and social distancing. Moreover, the paper is of the view that e-learning would be the best alternative: however, the various modes of e-learning required face-to-face lecturing, which may not be possible or safe at this period.

KEYWORDS: CODVID-19, Online Teaching and Learning, Pandemic, Home Economics

Introduction

The emergence of Corona virus known as the COVID-19 pandemic devastated all sectors of the global economy. The educational system of the world was halted because of social distancing and the lockdown. The conventional paradigm of teaching fails and teaching/learning suffers a severe setback all over the world including Nigeria. Teaching and learning in science education is evolving. Many decades ago in Nigeria, the conventional methods of teaching holds sway in the educational sector (Aina & Langenhoven, 2015). In recent times, teaching and learning had developed into an electronic paradigm (e-learning)

that pervaded the entire schools of the world. However, in Nigeria's higher education context the issue of e-learning is not common (Ajadi, Salawu & Adeoye, 2008; Kyari, Adiuku-Brown, Abechi & Adelakun, 2018). The world is not static but dynamic and technology is changing human endeavor rapidly. Along with the changes are various challenges the human race is facing which makes our education fragile and weak such as the current problem of COVID-19 pandemic. The pandemic has exposed the weakness in teaching and learning in Nigerian schools because the typical teaching paradigm fails.

In Nigeria, the current lockdown in the country occasioned by the COVID-19 pandemic is severely impacting science education. The advent of Coronavirus (COVID-19) in Nigeria has dealt a severe blow to the education of the nation in 2020. The effect of the pandemic is alarming in the educational system of the nation (Sahu, 2020). Within short months the virus entered the country it spread widely to nearly all the states. The government short downs all schools in the nation and clamoring for social distancing to curtail the spread of the virus. Social distancing is one of the community mitigation measures that are recommended during influenza pandemics (Ahmed, Zviedrite & Uzicanin, 2018). Social distancing has been considered effective to curb the spread of COVID-19 (Blocken, Malizia, van Druenen & Marchal, 2020). Social distancing is a step taken to reduce physical contact with other individuals (European Centre for Disease Prevention and Control, 2020). It is a measure taken during a pandemic to restrict when and where people can gather to stop the spread of an infectious disease.

The period of COVID-19 pandemic is a typical example of times when conventional teaching paradigm could not work in schools. During this period, as a measure of social distancing, students and teachers are not allowed to interact physically. Schools were closed down for many weeks thus teaching and learning are disrupted (UNESCO, 2020). Teaching and learning in science required interactions between students and the teachers which may not only be physical (Akhtar, Hussain, Afzal & Gilani, 2019). Therefore, students staying away from schools for a long period may adversely impact their academic performance. It is, therefore, essential the Nigerian government is more committed to e-learning in our tertiary institutions. Although, e-learning is not new in the Nigerian educational system, but the quality and effectiveness are critical. One of the learning framework that enable students to connect with the teacher to learn outside the school context is Google classroom.

The Concept of Coronavirus Pandemic

Coronaviruses are a broad family of viruses that cause disease from the common cold to more severe diseases like Middle East Respiratory Syndrome and Severe Acute Respiratory Syndrome. COVID-19 is an unexplained modern mutation of human beings. The COVID-19 source is still unknown although the initial cases were related to the Huanan South China Seafood Market. While many of the early patients worked in or visited the market, none of the exported cases came into contact with the market, suggesting either human to human transmission or a more widespread animal source (WHO, 2010). In addition to seafood, social media sources report that the Huanan South China Market has sold snakes, birds, and other small mammals, marmot, and bat. The WHO announced that environmental samples taken from the marketplace have reported positive for the novel coronavirus but no specific animal association has been identified (WHO, 2010). An initial report indicated that snakes may be the potential source based on codon use, but others rejected the claim. Researchers are currently working on defining the COVID-19 source, including possible animal intermediate vectors.

Concept of Online Teaching and Learning

In recent years, many of the universities and educational institutions worldwide offer online services such as for admissions, virtual (online) learning environments in order to facilitate the lifelong learning and to make this compatible with other educational management activities (Rajiv & Manohar, 2011). For example, a teacher may create a purely Web-based delivery system including online handouts in respect of student's activities, projects and lists of resources for reference. The students and other learners may access web-based material anytime from anywhere in the world, being connected through Internet Longmire (2001) states "e-Learning covers a wide set of applications and processes such as computer-based learning systems, Web-based learning systems, virtual classrooms, and digital collaborative learning GroupWare packages. E-Learning content is mainly delivered via Internet, intranet/extranet, audiotape and videotape; satellite broadcast, interactive TV, DVD and CD-ROM, and the still to emerge wireless application protocols (WAP).

E-learning according to Markus (2008) can be defined as a learning process created by interaction with digitally delivered content, network-based services and tutoring support. E - learning is any technologically mediated learning using computers whether from a distance or in face to face classroom setting (computer assisted learning), it is a shift from traditional education or training to ICT-based personalized, flexible, individual, self-organized, collaborative learning. That is based on a community of learners, teachers, facilitators, experts.

Concept of Home Economics

Home economics is a discipline, which is explicitly concerned with the family and all aspects of family living. From the time it was founded in 1902, during the Lake Placid Conference and until the present, its basic mission is still to improve individual and family life amid changing social, political, economic and physical conditions. It is accomplished through "the study of laws, conditions, principles and ideals which are concerned on the one hand with man's immediate physical environment, his nature as a social being and the relationship between the two factors". Its broad areas of concern revolve around the goal of helping families meet their basic needs and realize satisfying personal, family and community goals based on an understanding of the physical, psychological and socio-economic needs of the family.

Nagoba and Mantri (2015) defined Home Economics as an entrepreneurial-based and skill-oriented field of study that is expected to equip learners with saleable skills that make for self-reliance and paid employment. By implication if Home Economics is to meet the national goals as stipulated in the policy document on Education (2004), the programme should be properly funded.

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Effective online education consists of online teaching and learning, boosting of several research works, principles, prototypes, theories, ethics and appraisal of benchmark concentrations on quality online course design, teaching and learning. Effective online learning is a byproduct of cautious design and planning of instruction with the application of organized model for designing and development of instruction.

Moreover, online teaching and learning is not a novel phenomenon, and it has been accompanying Nigerian higher education institutions for some years now Digital transformation of Higher Education institutions is a topical issue that several stakeholders of education must feel concerned about, abilities to apply ICT in every spheres of life are on incremental level, thus universities must be up to the task of preparing potential professionals to be able to face challenges and provide solutions and this transformation has suggested the integration of sustainable management to be able to adjust to the modifications enforced as a result of novel technologies (Abad-Segura et al., 2020) and pandemic recently.

Feenberg (1999) proposed five reasons for technology use in education: (1) motivation, (2) distinctive instructional abilities, (3) higher productivity of teachers, (4) essential skills for the Information Age, and (5) support for new teaching techniques. Internet is particularly compatible with the way students now prefer to learn. Online education offers more than convenience. For all the mythology of the classroom, many students show up and snooze rather than learn, but the internet forces students to focus and to be active participants in learning rather than empty vessels into which academics try to pour their knowledge.

Educational institutions are using the provided advantages such as simple and fast creation of micro content, social factor, which ensures instantaneous communication and feedback, which in their own turn promote further creation and improvement of digital content as well improving communicative skills, which are very important in the study process (Pande, Wadhai & Thakare, 2016). Some institutions in the attempt to create a safe study environment choose to build their own inner networks, others choose integrative approach and use already existing media open to the public and try moving the study process into the public space creating studying communities there. Students in digital environment really profit communicating with their peers and lecturers who could enable the students to achieve a higher level of understanding. Online discussions enable students to improve their literacy skills. The use of internet in education requires focusing on the interests and needs of the students as well as enhancing connections with the students not only due to physical presence in the classroom.

The e-learning zone is the combination of android and computer applications for the purpose of teaching and learning. The following are the android and computer software applications that are proposed to be used in the teaching and learning of Home Economics in Akwa Ibom State:

- **Google Classroom**: This is a free web service that is developed by Google for schools that aims to simplify creating, distributing and grading assignments in a paperless way with the purpose of streamlining the process of sharing files between lecturers and students.

  Google Classroom is a Google Apps for Education that helps the teachers to create and organize assignments quickly, provide feedback efficiently, and communicate with their learners easily (Shaharanee, Jamil & Rodzi, 2016). The application has been used as e-learning (Henukh, Rosdianto & Oikawa, 2020). Research studies indicate the application helps students to learn more electronically and teachers spend more time with students than with papers (Basher, 2017; Rabbi, Zakaria & Tonmoy, 2018). Google classroom is an emerging technology in education since 2014, which had impacted teaching and learning in most developed and developing nations (Shaharanee, Jamil & Rodzi, 2016; Basher, 2017; Rabbi, Zakaria & Tonmoy, 2018; Henukh, Rosdianto & Oikawa, 2020). Previous studies show that google classroom enhances ongoing learning on the basis that

the students and the teacher can be sited in various geographical contexts (Mafa, 2018; Henukh & Rosdianto, Oikawa, 2020).

Previous studies had suggested that e-learning has challenges that could make them not suitable at this period of COVID-19. The inadequacy of Nigeria's weak and underdeveloped broadband infrastructure is a significant shortcoming (Trucano, 2014). For Mohamedbhai (2014), inequalities could be one problem of distance e-learning because of the differences existing between urban and rural students; between the rich and the poor who cannot afford the cost of internet.

Ajadi, Salawu, and Adeoye (2008), the problem of bandwidth and diversion of intention on the net are some of the problems associated with e-learning. Earlier studies show that Google Classroom enhances learning on the basis that the students and the teacher can use it in different geographical locations (Mafa, 2018; Henukh & Rosdianto, Oikawa, 2020). Google Classroom launched less than a decade ago has been one of the compelling ways technology is impacting teaching and learning in the world (Azhar & Iqbal, 2018).

Given the above, it is apparent that one way to mitigate the impacts of COVID-19 on science education may be to adopt e-learning mode to teach science in Nigeria higher institutions. Therefore, the online e-learning, which does not depend on traditional paradigms like the Google Classroom would be the best for instruction in science education. The Google Classroom framework would provide the same instruction to every student irrespective of their parents' background. It will offer the students the same classroom context as against the present situation where some students attend school well equipped with learning resources while some do not.

The three fundamental menus when anyone logs in to the Google Classroom account are *streams*, *class-work*, or *student activities*, and *people* (Henukh & Rosdianto, Oikawa, 2020). The *stream* is used for creating announcements, to discuss ideas, or see the flow of assignments, materials, quizzes from the topics taught. The teachers use *Class-work* to make test questions, pretests, quizzes, upload materials, and hold reflections (Henukh & Rosdianto, Oikawa, 2020). The teachers use the *people* menu to invite students by using the access code that is available in the people bar.

Research shows that many countries are using Google Classroom in their schools because of its effectiveness. Studies conducted at the Bostwana College (Mafa, 2018), Barett Hodgson University (Azhar & Iqbal, 2018), Musamus University (Henukh & Rosdianto, Oikawa, 2020); Basher (2017); Rabbi, Zakaria & Tonmoy (2018) shows it develops students' skills. Google Classroom has lots of educational benefits that could be excellent for science education. According to Hussaini, Ibrahim, Wali, Libata, and Musa (2020), it allowed teachers to post notes, assignments, create different groups in one class, invite another teacher to the class and it is flexible.

Google Classroom can be accessed anytime and anywhere. Students do not need to get to a designated building called classroom before receiving lectures and parents and guardians can track the progress of their wards (Mafa, 2018). It minimizes the paperwork for the teachers, helps classroom management. It enhances the student-teacher interaction as well as communication (Azhar & Iqbal, 2018).

However, there is no perfect system without any challenge. Studies indicate that Google Classroom has some instructional challenges (Mafa, 2018; Henukh & Rosdianto, Oikawa, 2020). Some of the challenges may not be peculiar to it only, but to all the e-learning

strategies. For instance, laboratory experiments cannot be taught with Google Classroom except to demonstrate. Therefore, the laboratory experiment for students during the COVID-19 may not be possible through the Google Classroom. The best alternative is to teach the practical aspects of science by demonstration through the Google Classroom and the laboratory works come later in a safe environment. Nevertheless, some factors may make the adoption of Google Classroom unsuccessful for science education in Nigerian schools.

- **Zoom**: This is a video communication that provides video telephony and online chat services through a cloud-based peer-to-peer software platform that is used for distance education and social relations

- **Whats App**: This is a freeware, cross-platform, messaging and voice over IP service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls and share images, documents, user location and other media.

- **Blog**: This is an online journal or informational website that displays information in a reversed chronological order with the latest post appearing first. It is a platform where a writer shares his/her view on any subject.

Impact of Online Teaching and Learning on Home Economics

- **Good feedback mechanism**: This framework ensures adequate feedback, as the students can interact with their colleagues and lecturers alike. This allows them to ask and answer questions that seem difficult or not well understood. Moreover, since the e-learning zone is padded with various types of applications, it will be easy for any student to use any of the platforms to communicate with their lecturers and their fellow colleagues.

- **Continuous learning**: In these regards, this framework allows continuous learning, as there is no obstruction by either the lecturer or the student to the scheduled classes on the e-learning zone.

- **Eradicates the cost of developing individual distance learning platforms**: With this framework, there is no need for any institution of learning to develop any distance learning application of their own since this framework presents the open sources distance learning applications.

- **Moderate cost of implementation and accessibility**: In this framework, there is no implementation or maintenance fee required, since the e-learning platform is open source and can be used by any individual free of cost. Nevertheless, the network provider charges data subscription fee for accessing the internet.

- **Makeup classes**: The multiple platforms technique will allow any student who missed a class to access other platforms for makeup classes since the courseware is available on other approved e-learning platforms and is available for use any time by the students.

- Exposure to new teaching method and platform: Though all the e-learning platforms on the e-learning zone might not be new to some, yet, it will be a means of exposure to new teaching methods and platforms for many others.

Challenges of Coronavirus Pandemic and Online Teaching/Learning of Home Economics

With Covid-19 pandemic, it has become clearer that education system is susceptible to external dangers. Ribeiro (2020) rightly noted that this digital transformation of instructional delivery came with several logistical challenges and attitudinal modifications. Feldman (n.d.) while addressing student assessment during this pandemic on how districts can legislate unbiased and evenhanded grading policies based on these recommendations; (i) pandemic-related anxiety will have negative effects on student academic performance, (ii) academic performance of students might be affect by racial, economic and resource differences, and (iii) the larger parts of instructors were not effectively ready to deliver high-quality instruction remotely. The challenges discussed here are limited to digital transformation of instructional operations during the period of Covid-19 pandemic.

Instability of electrical power supply: The first disadvantage to be addressed here is this because of the current state of the epileptic power supply Nigeria is facing as a country. This poses a major threat to the smooth running of this system as many lecturers and students will spend so much on generator and fuel usage.

- **Network problem**: The unpredictable network problem is another issue here as some areas in the country may have network issues at different times of the day.
- **Internet Access (Data subscription):** The rate at which the data subscribed are deducted is quite alarming and this can be a major drawback as lecturers and students will need to be subscribing from time to time so that they can be available for the online classes.
- **Affordability of learning equipment (Smart Phone)**: Not all students have and can afford smartphones because some parents are still struggling to fund their children's education and may not provide smartphones to them at some point in their studies.
- **Inadequate technical knowhow:** Since it is not all the lecturers or students that are aware of some of the platforms, some people will need training, guide or help in order to use the platforms successfully.
- **Environmental Distraction**: As observed from the society, series of environmental distraction can be a drawback to this system. These could include various addictions, house chores, family influence ate.
- **Duplication of courseware on different learning platform**: Since the platforms offer similar services, the materials, courseware and lecture notes will be available on all the platforms therefore duplicating the materials on the platforms.
- **Unexpected shutdown operation of any of the e-learning platform will lead to obstruction in learning**: The last disadvantage to be discussed here is this. Some technologies and application have either been bought over by new people with new terms and conditions or go into extinction fully.

Conclusion

The worst of the entire problem is the poor quality of the academic staff in higher institutions in Nigeria. It is worrisome at this ICT age that many lecturers are not

computer literates. The quality of higher education depends upon the quality of the teachers imparting it: the teacher's use of ICTs makes the lecture effective and improves the quality of teaching. The above discussions highlighted that those quality teachers who are active user of ICT for teaching is indispensable for any quality teaching and learning process. The use of online teaching and learning cannot be successful except the lecturers are ICT compliance. However, some challenges associated with the framework are not strong enough to discourage its implementation. However, some factors that could militate against its success in Nigeria schools should not be downplayed as the script identified.

Recommendations

The online learning would be an innovation in the educational system of the nation. Therefore, to adopt it for the teaching of Home Economics, the following recommendations are suggested:

- The government should be prepared fully to adopt the paradigm without any political bias
- The government should make adequate money available to strengthen and develop the Nigerian broadband infrastructure.
- There should be proper monitoring to ensure the correct software and hardware are purchased and adequately installed in every higher institution.
- Academic personnel of every institution must be adequately trained through seminars and conferences. Those who are not computer literate must make use of staff development to update their computer’s knowledge.

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