



Analysis of School Closure and Online Teaching-Learning in Higher Education Amid COVID-19 Pandemic

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Abstract: *Corona virus or COVID-19 sudden outbreak in the small city of Wuhan, China in December, 2019 threw the entire world into panic due to rapid spread of the virus. In response to the upsurge, the various International Health Agencies such as WHO, UNICEF, UNESCO and others in collaboration with government at all levels worldwide came up with the idea of school closure as one of the strategies to minimize the spread of the virus. Consequently, online teaching-learning was introduced in order to keep a good flow of the education curriculum so that learners especially those in tertiary institutions are not stagnated. There is therefore, the need to examine the efficacies of the platforms used during COVID-19 periods in order to identify the activities of the programme, the benefits and constraints of online teaching-learning, teacher-students' perceptions of it so that appropriate measures can be put in place to address observed challenges in the event of another round of school closure following fresh waves of the pandemic. Notable platforms used in higher education level during COVID-19 include zoom, start-me, Classtime, Classwize, Google Classroom, Skillshave, ClassDojo, Blackboard Learn, Parley, Feedback Fruits and Wexideo, Codecademy, Adobe, Captivate, Seesaw, Articulate 360, Future Learn, Inspire and many more. The review also shows that online teaching-learning brought about a change from the traditional teaching-learning methods to e-learning. However, it was noted that for any innovative change to take place whether external or internal, three wise step processes are involved namely; unfreezing, changing and refreezing. The identified benefits of online teaching-learning situation among others is that e-learning supports higher education students in effective utilization of the time and getting them committed to their courses. It also brought more confidence, reduce stress and enhance concern and empathy. Despite the observed benefits, it was reported that e-learning during the period was characterized by differences in the material and human resources invested in providing support for students in favour of upper/Middle –class students. Furthermore, students' perceived a general lack of motivation as immediate feedback was not possible during the online teaching-learning transition phase while some teachers were unsure whether the students switched on the computer for the namesake or actively present at the moment or sitting somewhere hence evidence of participation sometimes could be doubtful. Based on that, the review concludes that school closures amid COVID-19 pandemic substantially increased the social class achievement gap. Some recommendations were made on possible ways to correct the observed anomalies in the event of another round of school closures amid fourth wave of corona virus pandemic.*

Keywords: Corona virus, school closure, online teaching-learning, higher education.

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Introduction

School closure constitutes the several containment strategies put forward for the prevention of spread of corona virus also known as COVID-19 pandemic worldwide in 2020. The arrival of the pandemic and subsequent school closures mean that students would face multiple challenges of educational hardships including quality education, hands-on experience, laboratory work, library visit, peer tutoring, remedial teaching, research and innovation (University Grant Commission, 2020). In a total of 195 countries all over the world, 191 countries were adversely affected by COVID-19. Similarly around 429 universities across the world were shut down and started conducting online classes and e-learning (UNESCO 2020; UNESCO 2020b). Administrators of schools, teachers and students had the dilemma of how to achieve the overall objective of the institution and individual, following the closure of schools and universities. By march 2020 the Centre for Disease Control and Prevention –CDC (2020), issued guidelines on the alternative teaching methods to communicate the class works and assignment to the students.

The COVID 19 is a highly infectious diseases or illness caused by server acute respiratory syndrome coronavirus2 (SARS –COV-2) first occurred in Wuhan city of china by December 2019 and shortly after took a pandemic proportions affecting all nations of the world. The onset of the novel Coronavirus devastated virtually the economics and socials and in response to the scourge, the international health organizations such as World Health Organization (WHO) United Nations Children Education Fund (UNICEF) and others in collaboration with nations of the world began to put appropriate measures in place in under to contain the spread of the virus (Schulten, 2020). One of the containment measure is lockdown.

Lockdown is a state of emergency protocol implemented by the competent authorities (Federal and State governments and the local authorities) to restrict people

from leaving their place of living. This resulted in mass quarantine and stay at home orders. Consequently, schools including higher institution of learning were shut. According to UNESCO (2020), more than 900 million learners were out of school globally in a bid to ensure continuity of the academic curriculum in all levels including tertiary level of education. As a result of this development, online teaching –learning was introduced by the authorities of institutions for possible reduction of educational inequalities among learners..

The wide spread effects of Covid-19 pandemic drastically increased inequalities in health, social and economic issues (Bambra, Riordan, Ford & Mathews , 2020, Johnson Joyce & Platt, 2021). For more than 900 million. Learners around the world, the pandemic led to closure of schools and universities (UNESCO, 2020. This unusual situation compelled teachers, parents and students to quickly adapt to a new educational context; distance learning. Consequently, teachers had to develop online academic materials that owned be used at home to ensure educational continuity while ensuring the necessary physical distancing. Undergraduate students suddenly had to work with various kinds of support which are usually provided online by their lecturers. For the undergraduate students lockdown entailed returning to their home towns while staying connected with their teachers and course mates via video conferences, email and other digital tools, one of the widely used techniques was teaching through Zoom.

Teaching-learning online occurred during COVID-19 due to anticipated uncertainties by school administrators in pursuing the traditional mode of instructions. Social distancing is of paramount importance, hence online teaching-learning mode became a necessity. This was what brought both organizations and individual in unfreeze phase evidenced in the theory of innovative change by Lewins (1958).



The focus of this review therefore, is to highlight activities that transpired during the teaching-learning via online during COVID-19 among students in higher institutions of learning with respect to characteristics of online teaching-learning, the benefits and constraints as well as teacher-students' perceptions of online teaching-learning. This may provide further insight into the lapses that existed among students of various divides with a view of proffering solutions on possible ways to stem the tide in the event of future school closures.

Online Education and Forms of On-Line Teaching– Learning Modes Adopted During COVID-19

Online education became a pedagogical shift from traditional method to modern approach of teaching – learning from classroom to zoom , from personal to virtual and from seminars to webinars (Martinez,2020). Ngampornechai and Adams (2016), define e-learning as learning supported with electronic technology such as online classes and portal to access the course outside the classroom. Previously e-Learning has been in a part and parcel of the curriculum of higher institutions of learning. In that regard, distance education and correspondence courses were popularly considered as the part of non-formal education. However, with COVID-19 pandemic coming in waves, online teaching-learning may gradually replace the old order.

Some of the most popular online communication platforms that would change the destination and direction of the whole education system across the world are zoom, start-me, Classtime, Neo, Classwize, Ted-Ed, Coursera, Google Classroom, Bakpax, Pronto, Skillshave, ClassDojo, Edmodo, Blackboard Learn, Parley, Docebo, Feedback Fruits, Udemy and Wexideo, WizIQ,Flipgrid, Codeacademy, Geynzy, Adobe, Captivate, Seesaw, Edx, Goceuardian, Articulate 360, Future Learn, Inspire and many more (Martinez, 2020). The popular vitrtual classroom application are ZOOM,Google classroom , moodle and Black board and play a vital role in the

transition from face to face classes to online and e-learning system (Stone, 2020). These platforms all have the capacity to provide healthy instructional interactions between the teachers and learners so that learners can be provided with additional opportunities to flourish on their curiously.

According to DQ Institute (2020), teachers through the online platforms can cater for students' digital skills which are on the brink of cyber risk into the educational opportunities to get success in future ventures.

However, for any innovative change to take place whether external or internal, three wise step process are involved namely; unfreezing, changing and refreezing. That is unfreezing of traditional teaching-learning occurred during unforeseen circumstances out of COVID-19, which brought to the shift into online teaching because of anticipated uncertainties in pursuing the traditional mode (Siegal et al 1996). Unfreezing step provided an opportunity for motivation and readiness among system and stakeholders.

The changing process provides two options, either to adopt a new online mode in practice in other institutions elsewhere or to innovate one's own. In that regard, Bridges (1991), points out that for any result-oriented change, there is need to have a time suited outlook and a new mindset for online teaching mode at an individual and organizational levels to supplement the transition phase.

Refreezing means integrating technology in our teaching-learning process that enables us to teach students with the methods in which they would not only feel comfortable but also, they can match the demand of technology in 21st century (Lewin, 1958). The three processes of innovative change as propounded by Lewin in 1958 could be useful in the implementation of online teaching-learning because, it will provide a useful guideline to students and institution management to supplement the transition



phase. This may be beneficial in the future implementations of higher education curriculum.

Higher Education and Benefits of Online Teaching–Learning

The higher education system opted for online learning to replace the face to face classroom teaching; as there is a relationship between students motivational and e learning (Harande, 2015). The platform of e-learning is more suitable for

university students as it facilitates students' engagement. In addition e- learning supports higher education students in effective utilization of the time and getting them committed to the courses it could also bring more confidence reduce stress and enhance concern and empathy. (Hassan 2018). Although there are some difficulties with the material preparation for e- learning as student may not be able to access the modules or lack understanding of the contents in modules teachers however find the e learning platform very interactive as the lesson can be mapped with visual aids and engaging learning (Bovill, 2020).

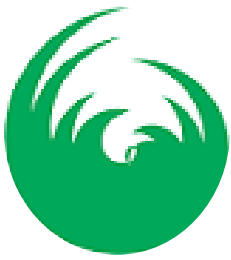
School closure accelerated the digitalization of education and amplified the role of parental involvement in supporting the school work of their children and wards. Getting students to work predominantly via.Digital resources rather than direct interaction with their teachers, and by making the learning process rely more than ever on families rather than teachers school closures exacerbate social class academic disparities. (Haris , Straker & Pallock, 2017; Zhang, ,2015). School closures have encouraged autonomous work among students. This independent way of studying is compatible with the family socialization of upper/middle class students, but does not match the interdependent norms more commonly associated with working class context (Stephens, Fryberg,, Johnson, & Convarrabias, 2012),

Constraints to Online Teaching-Learning During COVID-19 School Closure

Teaching-Learning During COVID-19 School Closure came with humongous challenges not only to the teachers and students but also to education administrators. According to Lahire (2019) and Lareau (2003), upper/middle–class contexts tend to promote cultural norms of independence whereby individual perceived themselves as autonomous actors , independent of other. Individual's and of the social context, able to pursue their own goals (Stephens , Markens, & Townsends, 2007). Conversely, in working class contexts characterized by low economics resources and where life is more uncertain , individual tend to perceive themselves as interdependent connected to others and members of social group (Stephens Markens & Townscends 2007; Kraus, Piff & Keltner, 2009; Stephens, Markns & Philips, 2014). This cultural mismatch between interdependent self–constraints common in working – class students and the independent norms of the educational institution has negative consequences for academic performance (Leglege & Rolland, 2019). This may increase the difficulties of working – class children in working alone at home. This argument is aptly supported by Diffmann, Stephens and Townsend (2020), in a recent survey which state that working–class students tend to underachieve in contexts where students work individually compared with contexts where students work with others.

Interestingly, some writers have suggested that independent (versus interdependent) self construal may also affect communication with teachers. Indeed ,in the contexts of distance learning ,working –class families are less likely to respond to the communication of teachers because then interdependent self lead them to respect hierarchies , and thus perceive teachers as an expert who can be trusted to make the right decision for learning.

Another issue of utmost consideration is the structural divide—that is unequal support from schools. Recent data suggest that differences in the material and human resources invested in providing support for students



during periods of school closure were characteristics in favour of upper / Middle – class students. Active help from school (for example online teaching, private tutoring or chats with teachers) occurred more frequently in richest households (64%) than in poorest households (47%) (Andrew, 2020). Another survey in the UK Revealed that the upper / Middle –class students were more likely to take online lessons everyday (30%) than working – class students (16%) (Cullinane & Montacnte, 2020).

This substantial difference could be attributable to the type of school as private .institutions are better equipped in terms of online platforms. For example (60%) of private institution have at least one online platform than state schools with 37% and were more likely to organize daily online lessons (Montacute, 2020). In addition, the probability of students receiving technical support from the school (for example providing students with laptops or other devices) is higher in the most advantaged schools than in the most deprived (Montacute, 2020).

In Sub-Saharan African, Nigeria inclusive, during lockdown , 45% of students had no exposure at all to any type of remote learning of those who did the medium was mostly radio television in papers rather than digital only 10% of students in African countries received some materials through the internet (Asnov, Flores ,Merkenzie, Mangomann & Schulte, 2021). This therefore, implies that the achievement gap and its accentuation during lockdown are due not only to the cultural and digital disadvantage of working–class families but also to unequal. Support from schools. Additionally the expectations of teachers may be lower from working – class students. For example they tend to estimate that working –class students invest less effort in learner that their upper / Middle counterparts .these differences in perceptions may have influenced the behaviour of teachers during school closure so much so that teachers in privileged neighbourhood provided more information to

students because they expected more from them in terms of effort and achievement (Tobisch & Dresel, 2017).

There is also the psychological dimension of digital cultural and cultural divides of learners. It has been observed that students of working – class tend to request less help in their school work than the upper / Middle class ones. This is due to the fact that such requests could result in reprimands. During school closures, these students (and their families) may in consequence have been less likely to ask for help and resources . upper/ Middle – class students are usually perceived and perceived themselves as less intelligent or less able to success (Croizet, Goudeau, Marot & Millet, 2017 Geoudeau & Croizet, 2017). Besides , working –class students also worry more about the fact that they might perform more poorly than their upper / Middle –class students . these fears influence academics learning in important ways . this is where self efficiency theory has a key role to play in engaging and perseverance in the face of difficulties (Bandura,1977; Usher & Pajares, 2008).

Challenges Faced by Teachers and Students in Adapting to Online Teaching Learning During COVID-19.

There are some difficulties felt by school authorities in the implementation of the change process in the education system that has been arisen following COVID-19 crisis. Online education is considered as the education provided by the open universities in Nigeria but in COVID-19 induced time online teaching-learning became a massive challenge to deal with and stakeholders are not potentially fit to adjust with the sudden educational change as they are not technologically fit to adjust with the sudden educational change as they are technologically competent to embrace the current situation (FutureLearn, 2020).

Majority of stakeholders possessed smart phones and only considerable numbers having laptops are the needed resources to implement online teaching-learning. Interestingly, many institutions of higher learning have



their ICT centres well equipped to undertake zoom teaching but the real issues was teachers' competency in the handling of online resources (University Grant Commission, 2020), teachers' Low competency in the use of online resources could be due to lack of preparedness, orientation and incentives of stakeholders in using online mode of teaching.

To run with the action plan for online teaching, it was observed that some teachers prepared and trained themselves independently to be accustomed to the technology required in using online teaching modes. At university level, system administrators and information and communication technology (ICT) experts provided necessary assistance to stakeholders and managing the change process. However, many pieces of research review on online teaching-learning and its effectiveness but however, did not focus on COVID-19 era which necessitated the present review.

Perceptions of Teachers and Students on Online Teaching–Learning During COVID-19

Teachers needed to log into the platform and upload the study materials required by students, but there were clear doubts on the discussion forum. Students complained of accessibility of internet connectivity, interestingly despite having a variety of digital modes of teaching – learning all most all the teachers and students both were using WhatsApp telegram and e mail for educational interactions submissions of assignments, clarification of doubt and conducting class tests.(University Grant Commission, 2020).

It was found that students did not have enough resources to join online hence find their digital divide. Most of the challenges were related interrupted electricity connection, intermittent signal issues, level of understanding, lack of scope for meaningful interaction the range for innovative teaching and mechanical conduct of classes were the significant challenges reported by teachers . Furthermore, it was found that teachers were unable to read the faces of

teaching pattern (UNESCO, 2020). Besides, a lack of motivational as immediate feedback was not possible during the online teaching– learning transition phase perceived by both teachers and students (Thomas, 2020). Some teachers expressed their grave concern over the laboratory activities for the research scholars during the lockdown period and demanded simulation techniques in laboratory practical. In addition, some teachers were in a dilemma as they were not sure whether the students switched on the computer for the namesake or actively present at the moment or sitting somewhere. Evidence of participation sometimes could be doubtful (Zhang, Wang Yang & Wang, 2020).

Generally as observed online classes are problematic certain subjects where the content exist that need real face to face interaction for complete understanding .replying on online interaction is detrimental to the health of the eyes and general body health and wellness too. It was also reported that students who resides in the rural settings with how socio-economic conditions of the family did not have access to desktop or laptop at home and the mobile phones were not found enough effective to participate in online classes .some students reported lack of conducive environment for learning at home as parents engaged them in domestic chores (Ledemam, 2020).

Other observed perceptions include even with students strong appreciation of the programme, the general consensus was that online teaching – learning is stressful . Additionally, there was class of time table schedule as some departmental courses came simultaneously with faculty wide course .in the word of one faculty member. There is lack of information regarding the perception of students learning requirement about online video tutoring and other online teaching in a distance mode. Whether students found online teaching tools sufficient enough to comprehend the theoretical portion of course curriculum or they were just using them as a mandatory online learning medium.



Conclusions

The unprecedented nature of the current pandemic means that there is insufficient data on what the school closure period is likely to produce in terms of learning deficits and these reproduction of social inequalities by making school learning less dependent on teachers and more dependents on families digital tools and resources school closure are likely to greatly amplify social class inequalities.

This research review on school closures and online teaching–learning amid COVID-19 pandemic has demonstrated that students and their families are highly unequal with respect to digital access, skills and use. It also suggest that upper / Middle-class students are more likely to be supported in their home work (by their parents and lectures) than working –class students. This suggests that upper class students and parents will probably feel better able than working –class ones to adapt to the contexts of distance learning via internet services . The result of this is that school closures amid COVID 19 pandemic will substantially increase the social class achievement gap. However, due to the fact that it is a recent occurrence, it may be too quick to measure with high degree of accuracy their effects on the widening of achievement gap however recent data are consistence with this idea.

Recommendations

Future directions are highlighted based on the findings and conclusions as follows:

With several countries of the world already experience 2nd 3rd and 4th waves of the pandemic resulting in fresh periods of local or general lockdowns, systematic efforts to test the prediction are urgently needed thus:.

1. The higher education sector needs to upgrade the technological facilities continuously in line with the current trends
2. There is need for financial and for the transformation from the tradition education system to modern e-learning

,the quality of information mapping on the students has become more complex

3. It is also necessary to stress the importance of the curriculum and its alignment with e learning. For instance, it is mandatory to connect e learning with essential qualities such as reading, writing, logic, and numerical skills which are the essential outcomes for the students to sustain in competitive environment.

4. Administrative support and online learning –Determine the of quality e learning. Administrative support is a portal factor in implementing an innovative e-learning system in higher education (Meyer & Barefield, 2010). Administrators are expected to manage the schools including higher education systems ,policies teachers drive and students learning environment (Strike, 2018b). There is a positive relationship between administration support and the finding of e learning in higher education and as such Ashwin and Mcvilty (2015), remark that effective course content in e learning would include an emphasis on dynamic learning and students engagement . hence, creating an appropriate course content has a significant impact on the excretion of effective e learning (little &Knihova, 2014).

5. It is also suggested that the online course content can be framed with various types of assignment, quizzes, and projects in order to improve students’ 2019 analysis critical thinking and problem solving skills.

6. A well-structured and appealing e-learning course design with visual information facilitates students learning through online classes. According to Ricart (2020), it should be designed according to the student’s competence and apprehension level in the e-learning approach, the course is designed with multimedia resources which makes learners show interest in learning and easily understand the concepts. Additionally, appropriate course design of e-learning support teamwork and learners find a fun environment during their learning (Liao, 2019)..This however, depends on the quality of



e-learning. The empowerment of teachers in generating, shaping and incorporating different ideas and practices in the development of online course content helps to achieve successful e-learning in higher education (Kebritchi, 2017).

6. It has been suggested that the instructors should give appropriate feedback on time to the students as this approach improves the e-learning in higher education (Ellis & Goodyean, 2010). Additionally, as the instructor is an essential element in education, observing instructor performance and gratification through peer elevation to check the proficiency of instructors and conducting a survey for their gratification is essential to improve the quality of e-learning (Acrefaire, 2020). The instructor's characteristic is crucial here. Instructors' characteristics relate to achievement of skills and knowledge using digital tools with collaborative learning, blended learning, measuring learning outcomes and more in-depth learning trends (Cheng, 2019).. Social support however, maybe needed to enhance instructors' characteristics.

7. Technological platforms used in the e-learning environment should be user friendly in order to achieve the learning outcomes. Installation and operation of e-learning applications should be easy to use; therefore providing a coherent structure of the application for e-learning makes students shift to online classes with greater enjoyment and satisfaction (Al-Rahmi, 2019). - The success of this social support system may depend largely on the technical support provided. Transformation towards e-learning supported the education process with internet and suitable technology during COVID 19 pandemic even though e-learning facilitates continuing education during the period of school closures, there was lack of adequate instructors. Also, instructors were facing difficulty in providing learning materials (Allo, 2020). Since the majority of the higher educational institutions moved to distance education, there is an opportunity to

increase the flexible learning model and set standard in e-learning (United Nations, 2020).

8. Assessment of specific and unique impact of school closure on students' learning requires that a longitudinal survey should be carried out to compare students' achievement at different times of the year for example, before, during and after school closure. This may establish whether the gap diminishes a few weeks after students return to in-school learning.

9. The mechanism underlying the increase is social class disparities during school closures should be examined. This will seek to quantify the contribution of each of the factors that might be responsible for accentuating the social class achievement gap.

10. It would be interesting to investigate teaching practice during school closure so that observe lapse be amended for another possible lockdown amid 4th wave of COVID 19 pandemic.

11. There is urgent need for intervention amid making teachers aware of the impact of social class of students and families on access to familiarity with and use of digital devices, familiarity with academic knowledge and skills as well as preparedness work autonomously.

12. Lecturers should be encouraged to adjust the way they communicate with less resource families due to differences in self-construal compared with upper/ middle-class families. This should contribute to better communication and help keep a better track of the progress of students during distance learning.

13. It is also necessary to help lecturers to engage in practice that have chance of reducing inequalities.

14. Particularly important is that teachers and schools to ensure that take-home assignments can be done by all students.. This can be achieved by setting up organization to help students whose parents are incapable of monitoring their children's homework. For example, homework helps group and tutoring by teachers after lesson learners giving that teaching-learning via online-



services during lockdown has increasingly taking place in families setting during the first wave of COVID 19 pandemic interventions involving the learners teachers and family are also likely to be effective.

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