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Handling Disrupted Learning During COVID-19 Pandemic: Learners' Experience in Nigeria

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ABSTRACT

Corona virus has affected not only human health but also educational sector. Schools were forced to suspend face-to-face learning while online learning was introduced. How could learning be undisrupted during the lockdown period is the thrust of this paper. The paper examined the effectiveness of podcast (video recorded) lesson as a strategy in online teaching and to what extent the strategy met the needs of the learners during the challenging period of pandemic COVID-19. The study adopted mixed method research which consisted of the three main phases of design. Questionnaire which comprises of 19 items and divided into two sections was used for data collection while fifty (50) participants participated in the study. It was discovered that learners displayed positive perceptions towards the use of video recording lessons during pandemic period. Learners reported that online learning should be used to compliment face-to-face teaching even after the pandemic period.

1. Introduction

The Corona Virus also known as COVID-19 which said to have originated from Wuhan China around November, 2019 rapidly spreading worldwide which has caused the death of thousands and was declared by the World Health Organization (WHO) as Pandemic. COVID-19 pandemic affected not only human health but also the educational sector. To contain the COVID-19 Virus, several countries embarked on school closure after placing banned on the face-to-face teaching. Among nations that placed embargo on face-to-face- teaching is Nigeria.

The index case was confirmed in Nigeria on 27th February, 2020 and this confirmed case has led to the Federal Government of Nigeria declaring total lock down to prevent further transmission. The lockdown led to school closure leaving thousands of youths and children out of schools.

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In line with the UNESCO Education Response in Crises and Emergencies in the Education 2030 Incheon Declaration and Framework for Action that countries should provide alternative modes of learning for out for school children and youths to accommodate learning flexibility in both formal and non-formal setting during emergency period.

The current situation has now made the Federal Ministry of Education and all stakeholders in Education to be worrisome and rethink of unlocking the potential of online- technology enhanced teaching during the pandemic period to maintain undisrupted learning. How could this be done and what are the challenges encountered by this strategy? what are the perspective of learners to this new strategy and finally does this approach enhances their learning experiences during the period and the sustainability of the strategy is the thrust of this paper.

Maintaining undisrupted learning among children and young adults, the researcher embarked on digital learning for learners that are less privileged during the lockdown period. Digital learning has been enabled since the advent of information technology. This has been used to share information, investigate, shopping online, banking and teaching and learning (Conole, 2013). The incorporation of appropriate use of technology in the classroom for the teaching and learning has improved better understanding of basic concepts of subject matter (Saba and Shearer, 2018). It has been established that despite the advantages of technology-based instruction, it has not replaced the human mind though it has been able to enhance and increase the pace of learning (Saba, 2011). Implementing the use of digital technology especially video cast as a tool for learning during the lockdown to help rather than hindering the learning due to face-to-face learning that has been put on hold due to COVID-19 Pandemic.

The skills and approach to facilitate teaching and learning poses challenges to teachers during the lock down period. The use of video cast might be a very good alternative to respond to learners' needs during this period (Saba and Shearer, 2018). In the light to respond to learners' needs during this emergency period, this study will focus on senior secondary school students' perception in the use of Podcast (video recorded) lessons provided as learning resources in lieu of face-to-face teaching.

Podcast is a computer-based technology that is made up of combination of audio and visual images (Spies, 2011). Audio and video files are made available on the internets which are downloadable and could be used later at learners' convenient time and pace (Taylor and Clarks, 2010; Beamish and Brown, 2006).

Podcast has been used in distance education since the increase in internet capability and advancement in software over some years (Spies, 2011). This has made learning appealing to learners and improve learners' achievement (Whelan, 2005). Podcast has been documented to be flexible, motivate, engaging and accessible when used in teaching and learning (Spies, 2011).

Rowe, (2006) discovered that the use of Podcast does not require too much on the technology but on the way it is used to achieve learning experience because once it is download it can be use without dependency on the internet. This is suitable for this pandemic period since most learners cannot afford to be on the internet for the whole day because of its financial implication. The ease of use for both learners and teachers made the researcher to result into the use of podcast during the pandemic period.

The study is based on the constructivist learning theory of Jean Piaget (1896-1980). He stated that learners should construct new knowledge from their past experiences. He affirmed that this took place through the process of accommodation and assimilation. The process of assimilation occurs when learners incorporate the new experiences into already existing frame work without changing the frame work (Bhattacharjee, 2015). Accommodation is the process of reframing one's mental representation of the external world to fit new experiences. The theory of constructivist advocated that learners should construct knowledge out of their experiences (Sharma, 2006). In a nutshell, it is a way or process of adjusting mental models to accommodate new experiences. Therefore, the following principles should be followed when constructing their own meaning.

- i. New learning should be built on prior knowledge
- ii. Learning is enhanced by social interaction
- iii. Meaningful learning should be developed through authentic task.

Constructivist approach has been proposed as an alternative to face-to-face teaching where learners discovered learning by themselves. Constructivist teacher encourages students to constantly assess how the activity will help them to gain understanding (Wilson and Cole, 1991). On this premise, the research will look that how viewing video recorded lessons could actively engage learners by constructing their own understanding during this period.

Statement of the Problem

To contain the spread of COVID-19 pandemic, schools have to shut down making face-to-face teaching impossible and thousands of children and youth out of schools. In order to maintain undisrupted learning during the period, online learning was introduced by making use Podcast (video recorded lessons). To this end the researcher will examine the perceptions of learners of the effectiveness of video recorded lessons as strategy in online teaching and towards extent in which the strategy has met their needs during challenging period of COVID-19.

The study is aimed to examine the perceptions of learners on the effectiveness of Podcast (video recorded) lessons as strategy in online teaching and the extent to which strategy has met their needs during the period of lockdown. More specifically, the study will examine

- i. learners' perception towards Podcast (Video recorded lessons) in online teaching using learning management system?
- ii. Assess the extent to which Podcast (Video recorded lessons) enhances the learning experiences and engagement of online learners.

Research Questions

The following three research questions are formulated at 0.05 level of significance

- i. What are learners' perceptions towards Podcast (Video recorded lessons) in online teaching using learning management system?
- ii. To extent is Podcast (Video recorded lessons) enhances learners learning experiences? And,
- iii. How engaging is the interaction using LMS for learning?

2. Methodology

The study used a mixed method research design which consisted of three main phases of design. Quantitative and qualitative approaches were applied in carrying out the study with results of one phase influencing the process of another phase. In phase one, the researcher identified research assistants and area of needs of learners taking physics as a subject at senior secondary school level syllabus. The questionnaire comprises of 21 items which was reduced 19 based on expert advice was used for data collection. The questionnaire has two sections. The first section consists of demographic data of participants while section B consists of 15 questions with 4-point Likert scale (Strongly Agreed to Strongly Disagreed). The instrument used for this study was developed in consultation with experts to ascertain content-related validity. The reliability was checked by implementing a pilot survey. Fifty (50) learners out of Eighty-five that shown interest were randomly selected to participate in the intervention because of the available space and facilities. Majority of the learners that participated were males (n=24) and females (n=26) with an average age of (± 20.8). However, they must be science students and indicate physics as one of the subjects taking in their various schools. In the second phase, the report from the questionnaire which learners identified difficult topics were extracted and lesson plan on the identified topics drawn out. The contents were arranged by the researcher in line with the syllabus. Video recording were made by research assistants employed. Each recording lasted for the period of 10mins for each topic and where the topic expanded for more than 10mins it was broken further into subtopics to be taken for another 10mins to take care of the listening span of learners. The topics treated include:

- Fundamental and derived units
 - Heat
 - Radiation
 - Waves
 - Motion
-

- Electromagnetism
- Electricity

Thereafter, the video recordings were saved into memory sticks for learners that are not privileged to have access to the Learning Management System (LMS) set up for them but can go through on their laptops without internet connection. The programme lasted for four weeks for learners' interaction and one week for the administration of questionnaire.

Third phase, Questionnaires was administered online and hardcopies sent for learners to assess their perceptions about the intervention to complete and returned via online or in hard copy on the programme during the lockdown.

3. Results and Discussion

The questionnaire on learners' perception towards the use of video recorded lessons in online teaching was administered on 50 participants. Table 1 below showed the socio-demographic distribution of sampled participants. The tables showed that majority of the participants were female (52.0%) while 48.0% were males. The table also showed that the average age of the respondents was 20.8 years. All the participants were offering physics as a subject in their various schools.

Table 1. Socio-Demographic Characteristics of Participants

Variable	Characteristics	Frequency	%
Sex	Male	24	48.0
	Female	26	52.0
Age Interval	16-20	22	44.0
Mean Age \pm SD = 20.8 \pm 2.5	21-25	28	56.0
Total		50	100.0

Source: Field Survey 2020. Sample size = 50 SD= Standard Deviation

Analysis of Research Questions

Research Question 1: What are learners' perceptions of the effectiveness of Podcast (Video recorded lessons) in online teaching during the lockdown period?

Table 2. Average score of student survey

Variable	Mean	SD	Category	Remark
The intervention fulfil the challenging needs of present time	3.62	0.490	4	Strongly Agree
I generally consider the instructors to be a poor lecturers and the materials irrelevant	1.60	0.495	2	Disagree
The videos are not educative	1.50	0.505	2	Disagree

I do not satisfy with the overall experience	1.48	0.505	1	Strongly Disagree
It is not a good alternative to face-to-face- learning	1.48	0.505	1	Strongly Disagree
Pooled	1.94	0.212	2	Disagree

Source: Field Survey 2020. Sample size = 50. SD (Standard Deviation). Category: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly Agree (SA).

Table 2: Learners with mean (3.62) strongly agreed that the intervention (video recorded) lessons via the LMS was able to fulfil the challenging needs of the present time. This is according to the findings of Francom, Ryan and Kariuki (2011) that discovered that podcast was able to meet the needs of distance learners when administered on them. Learners (1.60) disagreed that instructors are poor lecturers and the materials irrelevant. This is in line with Saba (2005) that lecturers taking part in video recorded lessons should be more focus where they know that learners are deficient in the content. Also, an appreciable number of learners disagree that the videos are not educative (1.50). Mean (1.48) of learners strongly disagreed that they are not satisfied with the overall experiences and that it is a good alternative to face-to-face learning. The results implied that the participants disagreed on the ineffectiveness of usefulness of (Video recorded lessons) in online teaching during the lockdown period (1.94). Therefore, Podcast (Video recorded lessons) in online teaching during the lockdown period is effective to learners in their daily academic activities during the pandemic period.

Research Question 2: To what extent is Podcast (Video recorded lessons) enhances the learning experiences?

Table 3. Learning Experiences of Learners

Variable	Mean	SD	Category	Remark
I learn better using e-learning	3.62	0.490	4	Strongly Agree
I understand materials better using LMS	3.60	0.495	4	Strongly Agree
Prefers blended face-to face with e-learning than e-learning alone	3.40	0.495	3	Agree
Difficulties experienced because of internet and Wi-Fi connection	3.40	0.495	3	Agree
The teaching was complex and I couldn't comprehend	1.62	0.490	2	Disagree
Pooled	3.13	0.224	3	Agree

Source: Field Survey 2020. Sample size = 60. SD (Standard Deviation). Category: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly Agree (SA).

Table 3: showed that participants with mean 3.62 strongly agreed that they learn better using video lessons and understand materials better on the learning management system (LMS). In addition, the participants (3.40) agreed that they prefer blended face-to-face with e-learning that e-learning alone. More so, participants experience difficulties in learning due to bad or slow internet and Wi-

Fi. This is in line with the findings of Scutter, Leva, Tim, and Sharron (2010) that teething problems are bound to be encountered by participants which were later resolved when exposed to videocast. Finally, the participants (1.62) disagreed that teaching was complex and that they couldn't understand the video.

Research Question 3: How engaging is the interaction using LMS for learning?

Table 4. Use of LMS among learners

Variable	Mean	SD	Category	Remark
I find LMS user friendly	3.64	0.485	4	Strongly Agree
I think the interaction is helpful	3.40	0.495	3	Agree
I feel more rewarding using LMS for learning	3.40	0.495	3	Agree
I rarely use computers to learn	1.58	0.499	2	Disagree
I have difficulties in navigating on the platforms	1.46	0.503	1	Strongly Disagree
Pooled	2.70	0.186	3	Agree

Source: Field Survey 2020. Sample size = 60. SD (Standard Deviation). Category: 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly Agree (SA).

Table 4: showed that 3.64 of participants agreed that the LMS is user friendly. They agreed that the interaction is helpful to them (3.40) and feel more rewarding using LMS during the pandemic period to learn (3.40). The participants disagreed and strongly disagreed that they rarely use computers to learn (1.62) and that navigation on the platform is difficult. In line with the survey carried out by Aixia and Wang (2011) reported that learners viewed learning through internets, satellites, television as advantageous and students' attitude towards online learning was positive. Generally, participants agreed that the use of LMS for interaction and learning is quite engaging (2.70). The finding is supported by Buzzetto-More (2008) that discovered that students preferred hybrid courses to traditional face-to-face delivery of courses

After the administering of the questionnaire, the participants are requested to provide suggestions on the way and manner which the intervention could be improved upon during and after the COVID-19 lockdown. Their suggestions are grouped according to the following headings; Contents, Technical and Usability problems, Facilitators and Interactions. Participants sampled response are represented with P.

Content:

P1: *"I enjoyed the video recorded lessons and the interaction with the LMS. However, the contents of the course should include more graphics and exercises"*.

P2: *"Some topics were well taught by the lecturer while few topics were not taught in a logical order"*

P3: “The teacher tried their best to make the lesson meaningful, they should solve more examples and time for each lesson should be increase from 10mins each”

Interaction:

Learners recommended that the online interaction should be extended beyond the period of lockdown. Some suggested that the intervention should complement face-to-face interaction used.

Technicality and Usability Problem:

P5: “This is my first time of making use of Learning Management System (LMS). I often forget my password”.

P6: “I always having problem in navigating to another page though, it is quite interesting”.

P7: “Visual and the graphics causes distractions for me”

Facilitators

P8: “Instructors perfumed wonderfully well. They should have engaged us more in examples”

P9: “Time allotted for each topic should be increase.”

P10: “Some facilitators taught in line with the syllabus while some went outside the scope, summary of the topics should be given at the end of each topic”.

4. Conclusion

This study aimed at examining the perceptions of learners on the usefulness of video recorded lessons as strategy in online teaching and the extent to which strategy has met the needs of learners during the period of lockdown as a measure to contain COVID-19. The use of online learning, LMS, Videocast should be incorporated into classroom learning to complement the face-to-face mode of learning as learners displayed positive perceptions towards the use of video recorded lessons during pandemic period. Appropriate skill training for teachers should be done to facilitate e-learning in schools. Facilities like internets, adequate power supply, softwares, computers should be made available in schools to facilitate e-learning not during this period alone but to be used effectively in the future. Research in education on optimizing instructional designs and delivery should be embarked upon.

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