



Electronic Whiteboard as Educational Medium for Higher Institution Students against the Scourge of Covid-19 in Nigeria

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Abstract: This paper tries to find out how electronic whiteboard can be used as educational medium for higher institution students against the scourge of COVID-19. COVID-19 is a deadly disease caused by a novel virus called respiratory syndrome corona virus 2 (SARS-CoV2). COVID-19 ailment can only be treated through medical attention and proper education. The paper, therefore, observes that students from higher institution are not spared from COVID-19 issues. So there is need to properly educate them about COVID-19 in order to reduce the scourge. The paper, therefore, suggests electronic whiteboard as medium for the education. The students are then educated on how COVID-19 is transmitted, spread, controlled, prevented, managed and treated. Finally, the paper recommends that more electronic whiteboard should be purchased, staff should be trained and related accessories should be purchased in order to educate students, better, on the scourge of COVID-19.

Keywords: COVID-19 Pandemic, Educational Material Higher Institution Students

1. INTRODUCTION

COVID-19 is a disease recently discovered by World Health Organization as global disease. It is a crown-like virus that can cause different ailments to human being. COVID-19 virus can easily be spread and contacted in different ways. COVID-19 virus can easily be spread and contacted in different ways. It can make people to be critically ill and sick especially those people with multiple and existing ailments. As observed by Centre for Disease Control (2020), COVID-19 infection can be fatal to those people with pre-existing diseases; because it can stimulate other infections. It can be transmitted easily when a man has a contact with hands or surfaces that contain the virus and later touch eyes, nose, or mouth.

Currently, health challenges of COVID-19 are enormous; it has no any specific medication and treatment. COVID-19 ailment can only be treated through continuous medical observation, regular hygiene and every time medical attention. With the scourge of COVID-19, everything has virtually gone standstill. It has negatively shaking the entire world than ever expected. Its emergency has affected every facet of live. The ravage of COVID-19 disease has put the entire world into a state of confusion and worrisome. The situation is unstable, gloomy and worrisome due to its effects and impacts. Issues and challenges of COVID-19 have led to total lockdown of different activities especially the entire world socio-economic and educational activities.

Unfortunately, higher institution students are not spared from the ravage of COVID-19 because they too are at risk and vulnerable. They are well known for their interactive and insensitivities activities. They socially collaborate with one another without any attention in the process of learning. Therefore, there is need to be properly educated on how COVID-19 is transmitted, spread, controlled, prevented, managed and treated.

2. CONCEPT OF COVID-19

According Sennimo (2020) COVID-19 is a deadly disease caused by a novel virus called respiratory syndrome coronavirus 2 (SARS-CoV2) discovered in 2019. It is regarded as a family of viruses that can cause multiple illness with different symptoms. As defined by Shabir (2020), COVID-19 is an infectious disease called respiratory syndrome corona virus 2 (SARS-CoV2) that can lead to different diseases. Majorly some of these diseases are difficult to treat. Some of them are acute pains, continuous headache, high fever, dry cough, frequent diarrhea, conjunctivitis, rash skin or discoloration of fingers, COVID-19 can be spread primarily from person to person by small droplets or by contacting COVID-19 contaminated surfaces. COVID-19 has no boundaries. It can infect any human being including higher institution students.

3. CONCEPT OF HIGHER INSTITUTION STUDENTS

These are tertiary education students. They are students that pursue their education beyond high school, including undergraduate and graduate students. Cowley and Williams (2008) described higher institution students as post-secondary school students including both public and private universities, colleges, technical training institutions and vocational schools' students. They are matured and well grown students that have right and to take social decisions. According to Cowley and Williams (2008) most of these students are matured; they are mostly given freedom to take personal and social decisions. Unfortunately, most of the are well known for their carelessness and lackadaisical behaviour towards any disease like COVID-19. Out of ignorance, they expose themselves to coronavirus infections because many of them do refuse to keep to COVID-19 rules and regulations. The worst is that students interactive behaviour cannot be controlled or managed because of their erroneous belief of COVID-19 existence

4. REASONS FOR EDUCATING HIGHER INSTITUTION STUDENTS ON COVID -19

Higher institution students are well known for their carelessness behaviour towards any disease like COVID-19. Out of ignorance, they expose themselves to different infections because many of them do refuse to keep to COVID-19 rules and regulations. They are, mostly, forced to adhere, follow common and normal health behaviour. As buttressed by Keynote Academic Solution (2020), students attend to social activities together without observing basic rules and regulations of COVID-19 pandemic; they unwittingly interact with one another and spread the disease unaware. The worst is that students interactive behaviour cannot be controlled out of their erroneous beliefs and attitudes.

Students are ignorance and more skeptical about existence of COVID-19. Students frequently attend to social and other activities at will without any fear of contacting COVID-19. Wake (2020) observed that out of students' negative attitude, belief and behaviour, they do not know that physical contacts are the main causes of infection and spread of COVID-19. They gather together and engage themselves in both academic and other leaning activities without any special arrangement. As elaborated by Wake (2020), the longer students interact with one another and the longer the interaction last the higher the risk of COVID-19.

Either parents or students from higher institutions are already infected with COVID-19 disease without showing the signs and symptoms. Their personal and parental medical background may not be known. Possibly, some students may be psychologically nursing one or two COVID-19 health issues; and so they maybe either depressed, suppressed or strained as a result of dread and deadly information about COVID-19. This may lead to students groping with loneness, anxiety and depression about COVID-19. Such experiences may lead to phobia and threat to their life. Chagwon, (2020) indicated that increase in cases of COVID-19 can contribute to level of stress and anxiety among students because they believe they may likely be infected. By this, higher institution students fear and worry about their own health and their love ones due to COVID-19 outbreak. They, therefore, look for ways of suppressing such depression and phobia.

5. EDUCATIONAL MEDIUM

Educational medium is a specific material being used by a teacher in order to facilitate any lesson being taught and to support students' understanding of the lesson. The teacher categorically selects a particular or singular instructional material that will aid his presentation from the beginning of the

lesson till its end. Abifarin (2015) defined educational medium as a resource which can be used in the classroom to teach in other to make teaching and learning more explicit, thought provoking, interesting, efficient and effective. This indicates that any selected educational medium like electronic whiteboard can be used as educational medium against COVID-19.

6. MEANING OF ELECTRONIC WHITEBOARD

Electronic whiteboard is regarded as an audiovisual board. It is a large electronic display board that learner scan interact, work with and at the same learn better. As elaborated by Vershaffel and Elen (2014), electronic whiteboard is a digital device that allows users to project files and images on the electronic board which are later manipulated to enhance learning. Electronic whiteboard is a relatively new tool that provides multi-visualization, multi-media presentation and multi-manipulation of images, figures and animation. Vershaffel and Elen(2014).described electronic whiteboard as a board that can connect or link a computer to a large sensitive board in order display expected and related information. It is a digital device that allows users to project files and images which are later manipulated on the board surface. As explained by Bumpres (2020), electronic whiteboard is an interactive board and a medium that can display and transform information.

Most popular future about electronic whiteboard is that it allows direct input and manipulation of information. Both marker, finger and other tools can be used to manipulate and control different letters and figures on the board. Connected and additional information from the computer desktop or any other software can be saved for further subsequent learning. Movies, powerpoint presentation, graphic and online conference can be added to make every presentation additional and standard based. With computer connection, electronic whiteboard can be used to access information around the world, in this case, quick search and assessment is possible in order to find out expected information to be presented by teachers and to be learnt by students. Electronic whiteboard, if properly utilized, can reduce COVID-19 health challenges among students in higher institutions.

7. BENEFITS OF ELECTRONIC WHITEBOARD AS EDUCATIONAL MEDIUM TO HIGHER INSTITUTION STUDENTS

Platinum Copier Solutions (2017) listed the following as benefits of electronic whiteboard in a classroom. The functions are more related and beneficial to process of educating higher institution students on challenges of COVID-19as indicated below.

Enhanced Lesson Delivery: Electronic whiteboard integrates various learning styles together with multiple senses, whereby, students will learn by seeing, hearing and interacting in different ways. The board equips leaners to learn with new innovative ways of acquiring knowledge without stress. Learning is simplified, complex idea is made ease and messages are successfully delivered. By seeing and hearing, students will remember more about the source, impacts and effects of COVID-19 effectively.

Enhance Interactive Learning: Electronic whiteboard allows students to interact with displayed information with multiple presentations. Students, totally, become part of the lesson and can even teach each other about their understanding of the subject being taught through touching, drawing, sketching or writing on the board. Students can become part of the lesson when they are well informed through movie or film from the board. Students will understand better on how COVID-19 is transmitted, spread, controlled, prevented, managed and treated. Students will audio-visually see and understand all processes involved.

Easy to Use: Electronic whiteboard allows easy manipulation of other technologies and software attached. Students and teachers can easily maneuver the board at will and at any time. No chalk, marker or other writing utensils needed in its utilization. Related data or information on the board are only modified by using a specialized pen to highlight, draw and write basic information. No clean-up whenever electronic white boardis used because there is no mess.

Flexibility in the Classroom: With electronic white board, lesson presentation is made logical and systematic which leads to better understanding of lesson being presented. Classroom activities are simplified and made flexible with the aid electronic whiteboard. Learners' learning activities are enthusiastically directed towards learners' academic and educational aspiration as a result of attached

accessories to the board. An indication that photos, graphs, maps, illustrations or video attached to electronic whiteboard has an abundance options in educating learners on COVID-19 and making teaching to be flexible and enthusiastic.

Connect to the Internet: Electronic whiteboard can be connected to the internet. Latest information can be accessed through cloud computing and other online connectivity by both students and their teachers. Electronic whiteboard can serve as easiest and possible ways of learning through online activities. When learners are connected to the internet. They then download and access related materials such as videos, films and movies as connected to the whiteboard. With internet connection, related online resources and virtual information on COVID-19 pandemic is obtained.

Integrated Technology: Electronic whiteboard can be integrated with other electronic devices. Related technological components, devices and accessories can be attached to electronic whiteboard in instructional delivery. Different devices such as computer, microscope, camera etc. are then attached to electronic board. This will then enhance students' learning and understanding of lessons. The possibilities of learning more about COVID-19 are near and endless where electronic whiteboard is supported with other devices.

Proven Effectiveness: Electronic whiteboard can improve students' level of understanding, comprehensiveness and progression about COVID-19. In electronic whiteboard presentation, students are more attentive leading to immediate assessment and appraisal. The testimony is more addressed through students' test score, narrative evaluation and literacy level. In this order, students are engaged and appraised with immediate feedback. The more students are engaged effectively; the more learning always increases.

8. AREAS BE LEARNT BY HIGHER INSTITUTION STUDENTS ON COVID-19 PANDEMIC THROUGH ELECTRONIC WHITEBOARD

Major areas to be learnt by students of higher institution on COVID-19 health challenges through electronic whiteboard are:

1. **Meaning of COVID-19:** Expected definition is, "COVID-19 is a disease caused by a novel virus called respiratory syndrome corona virus 2 (SARS-CoV2), which may lead to multiple and existing ailments". The definition is possible when students watch recorded movies and films.
2. **Causes of COVID-19:** Through online video from electronic whiteboard students can clearly see figures and images of different viruses and infections that causes COVID-19 diseases. Expected information to be acquired by students on causes of COVID-19 such as "Respiratory Syndrome Corona virus 2 (SARS-CoV2)".
3. **Symptoms.** Related topics be learnt on symptoms of COVID-19 are "fever, chills, dry cough and tiredness, pains, diarrhea, conjunctivitis and headache". Students are educated through online debate and online conferences on symptoms of COVID-19 as indicated by electronic whiteboard.
4. **Transmission of COVID-19:** Students watch recorded drama or online interview from electronic whiteboard to see how COVID-19 is transmitted. Expected concepts to be learnt by learners on how COVID-19 is transmitted are: "corona virus droplets, COVID-19 circulation, infections and propagation of COVID-19".
5. **Spread of COVID-19:** Expected topics to be learnt by students on spread of COVID-19 are: "social-distance, self-isolation and total-lock down and self-interactions". This is possible where student watch recorded video-clips or online jingles with the aid of electronic whiteboard.
6. **Prevention of COVID-19:** Related areas to be learnt by students in checkmating the spread of COVID-19 include "sanitation, contact distance and proper hygiene". This is possible with electronic whiteboard when students draw, sketch and illustrate with different figures on the board.

7. **Control of COVID-19:** Expected topics to learnt on control of COVID-19 are: “Do and Don’ts of COVID-19”. It is possible by allowing students to watch recorded films and online movies from electronic whiteboard.
8. **Management of COVID-19:** Related concepts to be learnt on management of COVID-19 are: “total isolation, total lockdown and total-closure”. COVID-19 Pandemic can be suppressed with the aid of electronic whiteboard through recorded video and online films.
9. **Treatment of COVID-19:** Expected concepts to be learnt by students on treatment of COVID-19 include “continuous medical attention and application of related medications”. This is possible whenever students watch online drama, online discussion and online interview.

9. HOW ELECTRONIC WHITEBOARD CAN BE USED IN EDUCATING HIGHER INSTITUTION STUDENTS AGAINST THE SCOURGE OF COVID-19

Information above is clearly possible to be learnt by higher institution students through the following stages.

Stage One: This is introductory stage, At introductory stage the teacher should strive to stimulate students with electronic whiteboard. The introduction can easily start with a short movie, audio-clip or still images. The whiteboard should clearly and specifically introduce what topic or concept expected on COVID-19 ahead of the main lessons. Objectives of the lessons should be clearly stated that will prepare and provoke students’ previous and current knowledge on the subject matter. This will then capture students’ attention and concentration right from the beginning to the end of the lesson based on chosen topic on COVID-19.

Stage Two: This stage is regarded as lecture stage. This is the most important stage where electronic whiteboard should be correctly used to educate students on COVID-19. It should be used widely to project major problems and challenges of COVID-19. Electronic whiteboard should, also, clearly clarify complex concepts being raised about COVID-19 health issues such as transmission, spread, control, prevention, management and treatment. Students are expected to watch related online movie, film, debate and conference or listen to music and jingles that provide solutions COVID-19 challenges. Every presentation should be elaborately presented in steps alongside with different and related topics on COVID-19 such as meaning of COVID, causes of COVID-19 disease, symptoms of COVID-19, transmission of COVID-19, spread of COVID-19 viruses and infections, control of COVID-19, prevention of COVID-19, management and treatment of COVID-19.

Stage Three: This is a brainstorming stage. The teacher should create problem solving session, questioning time and demonstration period on COVID-19 with the aid electronic whiteboard. The brainstorming should be presented step by step with emphasis on expected questions, answers and actions. There should be interactions and collaboration between the whiteboard, teachers and students. Both teachers and students can work together and co-solving educational challenges of COVID-19. Students’ contributions, demonstration and knowledge should be appraised and commented for every p. Students are encouraged to write down the key points majorly on meaning, causes, transmission, spread, control, prevention, management and treatment of COVID-19 Pandemic. Teacher can boost the lesson by adding different media such as photo, video, articles either directly or indirectly from the board. Visual effects such as sketches, infographics, drawings, maps and text can be personally added by the teacher and students in order to collaboratively and individually engage students more. Students are encouraged to demonstrate and discuss every presented concept with their classmate. Students can create note with interesting drawing by sketching and jotting useful points.

Stage Four: This stage is called summative evaluation. The primary aim of summative evaluation is to find out the rate at which stated objectives have been achieved or not. Teacher should try his best to use electronic whiteboard in verifying students’ level of understanding different concepts about COVID-19. Electronic whiteboard should be used to raise related questions on COVID-19. These should include assignment, homework, tests and examinations. Students can equally discuss, explain and demonstrate their level of understanding about topics. The primary aim is to find out whether electronic whiteboard itself actually delivered the message effectively.

10. CONCLUSION

With the fact that Covid-19 is a global health issue, students from higher institution are not spared; they are vulnerable and at risk to the pandemic. These, therefore, indicate need to protect higher institution students from the scourge. The protection is possible when they are well educated with the aid of electronic whiteboard. The education should, therefore, emphasize on meaning, causes, transmission, spread, control, prevention, management and treatment of COVID-19 Pandemic.

11. RECOMMENDATIONS

In order to properly educate students from higher institution on the scourge of COVID-19 with the aid of electronic whiteboard, the following is hereby suggested by this paper:

1. Electronic whiteboard should be purchased by school authorities so that every student will have access to the educational board.
2. Staff should be trained on how to properly use electronic whiteboard as instructional medium. The training will add, more, to teachers' knowledge on utilization of the board.
3. Related and relevant equipment, facilities and accessories should be purchased by school authorities. These will add to proper utilization of electronic whiteboard.

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