

## History Education Students' Perception of Virtual Teaching-Learning Process During the Covid-19 Pandemic in Kwara State, Nigeria.

Masud Ibrahim Oniye<sup>1</sup>, Zainudin Hassan<sup>2</sup>, Taofeek Adedayo Quadri<sup>2</sup>, Abdulrahman, Yusuf Maigida<sup>3</sup>, & Mas'ud Oniye Tawakalitu<sup>4</sup>

<sup>1</sup>Department of Arts Education, University of Ilorin, Ilorin-Nigeria.

<sup>2</sup>Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia, Johor, Malaysia.

<sup>3</sup>Department of Educational Foundations, Faculty of Education, University of Port Harcourt-Nigeria

<sup>4</sup>School of Basic and Remedial Studies, Kwara State College of Education, Ilorin, Nigeria.

[oniyemasud@unilorin.edu.ng](mailto:oniyemasud@unilorin.edu.ng)

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### ABSTRACT

In Nigeria, the need for the reopening of schools during the COVID-19 pandemic necessitated the introduction of a virtual teaching-learning process as an alternative to the face-to-face instructional approach. This study thus investigated the perception of history education students on the virtual teaching-learning process during COVID-19 pandemic in Kwara State, Nigeria. It examined the challenges of the virtual teaching-learning process during Covid-19 pandemic as perceived by history education students in Kwara State, and the level of the respondents' willingness to further use virtual teaching-learning process after the pandemic. The research design employed for this study was the descriptive survey. Multi-stage sampling technique was used to select 248 respondents and the "Perception of Virtual Teaching-Learning Process Questionnaire" (PVTLPQ) was used to collect data for the study. At the end of the questionnaire administration, 235 copies were valid for data analysis. The method used to analyse the data collected were descriptive and inferential statistics. The findings of the study revealed that some of the benefits of the virtual teaching-learning process were flexibility to the study at the time convenient to the learner and accommodating different types of learning styles. Lack of internet connectivity, epileptic power supply and lack of computer/phone devices were some of the identified challenges of the virtual teaching-learning process. Also, gender, age and level of study did not influence respondents' perception of the virtual teaching-learning process. Based on the findings of this study, it was recommended that government and curriculum planners should integrate the virtual teaching-learning approach into the classroom instructional process so that both the students and their lecturers can be well acquainted with the use of ICT and be able to explore the benefits embedded in its usage.

**Keywords:** Perception, History of Education Students, Virtual Teaching-Learning Process, Covid-19 Pandemic

### Introduction

The emergence of corona virus disease in 2019 caught every nation unaware. It becomes so serious that it constituted a health emergency and was declared a pandemic in February 2020 by the World Health Organization (2020). The pandemic affected nearly all facets of socio-economic and education systems of every nation across the globe. Many lives were lost, businesses were shut-down, huge economic loss was recorded and schools at all levels were closed. According to Wondwosen and Damte (2020), Africa's economy lost between 90 billion and 200 billion dollars in 2020, with GDP dropping by 3 to 8% points and schools were closed in over 100 countries throughout the world. In Nigeria, the government mandated all students and school personnel to stay at home in order to prevent the spread of this fatal disease, as it is easily transmitted through direct contact with the virus's carrier (Adelakun, 2020).

In about 5 months (between March and July 2020) of the emergence of Covid-19, the prolonged compulsory holiday (lockdown) of schools was damaging to the government, parents, schools' staff and students (Iyanuoluwa Samuel, 2020). The government paid workers who did not work for their earnings, school staff and students were sick of staying at home and involvement in social vices, anxiety, fear, and depression became widespread among students during this time. This brought about the initiation of the virtual teaching-learning process to reach the students at their various homes (Akinwumi & Itobore, 2020). In many Nigerian tertiary institutions, particularly universities, students were reached by their lecturers online and they were able to resume academic activities as a result of this outbreak (Sakpere et al., 2021).

Throughout the world, virtual teaching-learning became popular as one of the best alternatives to make the education sector functional in the pandemic period. Many tertiary institutions in Nigeria replaced the traditional face-to-face classroom interaction with online academic programmes. Through innovative learning management systems, information technology became a solution for the continual learning process during the lockdown period (Zayabalaradjane, 2020). This allowed educators to integrate technology into teaching and evaluate students' completion of course work. Lecturers and their students thus engaged in teaching and learning through different video conferencing services such as GoToMeeting, BlueJeans, Google Meet, Team Viewer, Microsoft Teams, Skype, WhatsApp, Cisco Webex Meetings, DingTalk, Zoom Meeting, Join.me, Dialpad Meeting, WeChat Work, among others.

Virtual learning is an innovative tool that promotes the teaching-learning process to make it more student-centred and flexible (Dhawan, 2020). Terms such as open learning, online learning, computer-mediated learning, web-based learning, m-learning, blended learning, among others are used interchangeably for virtual learning. Virtual classes had broken the chain of coronavirus disease and promote the functionality of the education system during the global pandemic. Apart from its epidemiological advantages, virtual learning is convenient, and it promotes access to educational resources, regardless of location and time (Salem, 2015). However, it needs an Internet connection to enable a successful teaching-learning process (Cojocariu, Lazar, Nedeff & Lazar, 2014), which might sometimes be problematic. Insufficient digital skills of the participants, lack of technological gadgets and funds to purchase sufficient data are some of the drawbacks of virtual teaching-learning. Other limitations of virtual learning include social isolation, lack of face-to-face interaction between teacher and student and connectivity issues (Sa & Serpa, 2020).

E-learning has never been adopted and accepted as real learning or the formal mode of education before this ongoing pandemic that compelled to resort to electronic learning solutions by the world over (Mahajan, 2018). Currently, as a result of the pandemic, most educational institutions are exploring and approaching e-learning to make it easy for students to accomplish their educational tasks without stress. Also, various e-teaching softwares are being explored by teachers or educators to bring maximum possible ease to their students (Nassoura, 2020).

According to Garrison, Anderson and Archer (2001), the success of web-based instruction is determined by creating a learners' group similar to the traditional classroom situation, as learning happens through three interdependent elements: social presence, cognitive presence and teaching presence. The study by Muthuprasad, Aiswarya, Aditya and Jha (2021) argue that there was no significant difference between online learning and face-to-face class concerning their satisfaction and also, they supported the fact that online classes will be as effective as traditional classes if it is designed appropriately. This implies that virtual learning might be a perfect alternative for the traditional classroom situation if they are designed appropriately.

In order to strengthen the effectiveness of virtual learning, there is a need to understand the perception of the users. As Kauffman (2015) indicates that perception of students towards virtual teaching and learning is vital because it is a leading factor that contributes to students' loss of motivation and dislikes for the virtual teaching-learning process. Studies have documented both positive and negative perceptions by students on virtual teaching-learning. Several studies indicated that instructor's interaction with the students has a considerable impact on the student's perceptions of online learning. For example, Aiyedun, Ogunode and Eyiolorunse (2021) assessed virtual learning during the Covid-19 lockdown in Nigerian public universities. The findings of the study revealed that inadequate funding, inadequate ICT infrastructural facilities, poor implementation of ICT policies, high cost of ICT facilities, poor ICT literacy level of lecturers and students, unstable electricity, unstable Internet Services and inadequate manpower as reasons why many public universities could not switch into virtual learning during the Covid-19 school clock down period.

Egielewa, Idogho, Iyalomhe and Cirella (2022) analysed online learning amid Covid-19 in Nigerian higher education, and they concluded that students of higher education in Nigeria have a low acceptance of online learning technology, preferring instead the traditional classroom setting, and thus being conservative and extremely slow to accept new technological innovations.

## **Statement of the Problem**

The Nigeria higher education system is built on the traditional face-to-face interaction between lecturers and students. However, the Covid-19 pandemic, which truncated the global education system, has changed the traditional method of instruction to a virtual teaching-learning process, with which both the lecturers and students are less familiar. It is believed that the virtual teaching-learning process will present a better understanding of history subject to its recipient considering the great benefits such as flexibility and comfortability it proffers. Despite this, the virtual teaching-learning process has been found with a lot of challenges in the Nigerian system of education. For example, many lecturers and students have inadequate knowledge of ICT; some do not have the required gadgets or devices such as android phones, tabs or laptops with which they can perform online tasks, while some cannot afford the incessant data subscription.

Also, internet connectivity issues; particularly, for those living in remote areas, home and environmental noise, inability to express and observe non-verbal cues, poor participation of class members are among other problems of e-learning (Junus et al., 2021). These have marred the instructional process by preventing detailed presentation and a better understanding of the subject matter; full background of mathematical or calculation-related subjects might also be difficult to grab. In turn, the academic performance of students may be affected negatively, protrude their negative perceptions towards virtual teaching-learning and demotivate them towards adopting the e-learning process in the future (Maia, 2020).

Furthermore, previous studies such as Iseolorunkanmi, Adebola, Rotimi, Nweke-Love, Adebisi and Lawal (2021) investigated the Covid-19 pandemic: Nigerian University lecturers' response to virtual orientation. The study found that lecturers from private universities responded to virtual teaching more than those from public universities; that the presence of infrastructural orientation influences virtual orientation; and that a negative relationship exists between the socio-demographic/occupational variables (gender, current position, years of experience) and virtual orientation of lecturers at Nigerian universities. Ebohon, Obienu, Irabor, Amadin and Omoregie (2021) evaluated the impact of Covid-19 pandemic lockdown on education in Nigeria: Insights from teachers and students on online learning. The respondents revealed that they had difficulties with an Internet connection. Students and teachers indicated they had limited interactions with one another, and this negatively influenced students' satisfaction. The teachers noted that there is an increase in the tendency for examination malpractice when an assessment was conducted virtually. More of the teachers admitted that it was difficult explaining complex scientific concepts.

There are several studies that have assessed virtual learning during the covid-19 pandemic, but empirical studies of that nature are scarce in Nigeria, particularly, among students of history education in tertiary institutions in Kwara State; thus, the need for examining the perception of history education students in the state on virtual teaching-learning in the era of Covid-19 pandemic.

## **Research Objectives**

The following are the research objectives for this study :

1. To investigate the benefits of the virtual teaching- learning process during the Covid-19 pandemic as perceived by history education students in Kwara State.
2. To examine the challenges of the virtual teaching-learning process during Covid-19 pandemic as perceived by history education students in Kwara State.
3. To know the level of the respondents' willingness to further use virtual teaching-learning process after the pandemic

## Research Questions

The following research questions are answered in this study:

1. What are the benefits of the virtual teaching-learning process during the Covid-19 pandemic as perceived by history education students in Kwara State?
2. What are the challenges of the virtual teaching-learning process during Covid-19 pandemic as perceived by history education students in Kwara State?
3. What is the level of the respondents' willingness to further use virtual teaching-learning process after the pandemic?

## Hypotheses

The following hypotheses were tested in this study:

1. There is no significant difference in the perception of male and female history education students on virtual teaching-learning during the Covid-19 pandemic in Kwara State.
2. There is no significant difference in the perception of history education students on virtual teaching-learning during the Covid-19 pandemic in Kwara State based on their accessibility to internet facilities.
3. There is no significant difference in the perception of history education students on virtual teaching-learning during the Covid-19 pandemic in Kwara State based on level of study.

## Methodology

This research is quantitative study; thus, the descriptive survey design was adopted to carry out the study. The survey design was considered appropriate because the study examined the perception of the respondents in regards to the virtual teaching-learning process during the Covid-19 pandemic using a questionnaire for data collection. According to McNabb (2008), the descriptive survey is a useful tool in developing a more focused study and can yield rich data that lead to important recommendations in practice. The population for this study was all history education students in the five public Universities and Colleges of Education in Kwara State estimated to be 609. The sample size, based on the Research Advisor (2006) was 248 respondents. The multi-stage sampling technique which involved purposive, proportionate and simple random sampling techniques was used to select the respondents. This is illustrated in Table 1 as follows:

**Table 1: Population and Sampling Procedure**

| Institutions                          | Population | Proportionate Sampling | Sample size |
|---------------------------------------|------------|------------------------|-------------|
| University of Ilorin                  | 102        | 102/609 * 248          | 42          |
| Kwara State University                | 79         | 79/609 * 248           | 32          |
| Kwara State COED, Oro                 | 162        | 162/609 * 248          | 66          |
| Kwara State COED, Ilorin              | 153        | 153/609 * 248          | 62          |
| Kwara State COED (Technical), Lafiagi | 113        | 113/609 * 248          | 46          |
| <b>Total</b>                          | <b>609</b> |                        | <b>248</b>  |

The two public Universities and three Colleges of Education in Kwara State were purposively selected, and a proportionate sampling technique was used to select the respondents based on the contributions of each institution to the total population of the study. Random sampling technique was then used to select the respondents from their various Departments. A random sampling gave equal chance to all the participants to be part of the study.

The data collection instrument used in this study was an adapted questionnaire from Khan, Vivek, Nabi, Khojah and Tahir (2021). It was titled "Perceptions of Virtual Learning Scale" (PVLS). The questionnaire comprised two sections; A and B. Section A dealt with the demographic characteristics of the respondents which include gender, level of study and accessibility to internet facilities, while section B contained 22 items on the Perceptions of Virtual Learning. The 4 points scale of Strongly Agree (SA) = 4 points; Agree (A) = 3 points; Disagree (D) = 2 points; and Strongly Disagree (SD) = 1 point was adopted. The instrument was validated by experts in Educational Technology and Measurement and Evaluation. The split-half reliability method was conducted on the instrument and the Cronbach reliability index of 0.86 was obtained; thus, adjudged the instrument reliable for this study. The descriptive statistics of percentage was

used to present the respondents' demographic profiles; mean and standard deviation was used to answer the research questions; while the inferential statistics of independent t-test and Analysis of Variance (ANOVA) statistics was used to test the hypotheses formulated at 0.05 level of significance. The SPSS software version 23 was used to analyse the data collected for the study.

## Results

The results of the study were presented using both descriptive and inferential statistics. The demographic characteristics of the respondents were presented using percentage, the research questions were answered using percentage and mean ranking. The hypotheses were tested using an independent t-test and ANOVA statistics. Out of the 248 copies questionnaire administered to the respondents, 235 copies were fit for data analysis. Given this, the demographic characteristics of the respondents are presented in Table 2 as follows:

**Table 2: Percentage Distributions of Respondents' Demographic Characteristics**

| N | Variables      | Frequency    | Percentage % |
|---|----------------|--------------|--------------|
| 1 | Gender         | Male         | 52.3         |
|   |                | Female       | 47.7         |
|   |                | <b>Total</b> | <b>100.0</b> |
| 2 | Level of Study | 100 Level    | 40.0         |
|   |                | 200 Level    | 39.1         |
|   |                | 300 Level    | 20.9         |
|   |                | <b>Total</b> | <b>100.0</b> |
| 3 | Age            | 15-25        | 26.8         |
|   |                | 26-35        | 53.6         |
|   |                | 36 & above   | 19.6         |
|   |                | <b>Total</b> | <b>100.0</b> |

Table 1 shows that out of the 235 respondents in the study, 123 (52.3%) were males; while 112 (47.7%) were females; thus, there are more males than females in the study. Concerning the respondents' level of study, 94 (40.0%) of the respondents were in 100 level, 92 (39.1%) were in 200 level; while 49 (20.9%) were in 300 level. This indicates that both the 100 and 200 levels students were more represented in the study. The respondents' age indicated that 63 (26.8%) of them were between 15-25 years, 123 (53.6%) noted that they were between 26-35 years; while 46 (19.6%) were with 36 years and above. Many of the history education students were between 26-35 years of age.

**Research Question One:** What are the benefits of the virtual teaching-learning process during the covid-19 pandemic as perceived by history education students in Kwara State?

**Table 3: Mean and Rank Order of Respondents' Perception of Benefits of Virtual Teaching-Learning Process During Covid-19 Pandemic**

| N  | The benefits of virtual teaching-learning include:                | Mean | SD    | Rank             |
|----|---|------|-------|------------------|
| 1  | flexibility to the study at the time convenient to the learner    | 2.84 | .952  | 1 <sup>st</sup>  |
| 6  | accommodating different types of learning styles                  | 2.71 | 1.022 | 2 <sup>nd</sup>  |
| 2  | ease and quick share of educational material                      | 2.68 | 1.020 | 3 <sup>rd</sup>  |
| 3  | improved collaboration and interactivity among students           | 2.58 | 1.085 | 4 <sup>th</sup>  |
| 4  | quick feedback between the learners and the instructors           | 2.56 | 1.009 | 5 <sup>th</sup>  |
| 10 | updated learning material   | 2.41 | 1.043 | 6 <sup>th</sup>  |
| 7  | access to higher education for all applicants                     | 2.03 | 1.107 | 7 <sup>th</sup>  |
| 5  | enabling students to study irrespective of where they are located | 1.94 | 1.032 | 8 <sup>th</sup>  |
| 8  | simplifying the learning process                                  | 1.85 | .979  | 9 <sup>th</sup>  |
| 9  | accessibility to study resources effectively                      | 1.75 | .924  | 10 <sup>th</sup> |

Table 3 shows that the respondents indicated 5 out of the 10 items as benefits of the virtual teaching-learning process during the covid-19 pandemic. This is because the items have mean scores that are above the average mean values of 2.50 (benchmark) for determining the significant benefits of the virtual teaching-learning process. In this regard, items 1, 6, 2, 3 and 4 with mean values of 2.84 (with standard deviation .952), 2.71 (with standard deviation 1.022), 2.68 (with standard deviation 1.020), 2.58 (with standard deviation 1.085) and 2.46 (with standard deviation 1.009) were ranked between 1<sup>st</sup> and 5<sup>th</sup> respectively. Thus, the topmost benefits of the virtual teaching-learning process, as indicated by the history education students in Kwara State, were the flexibility to the study at the time convenient to the learner, accommodating different types of learning styles, ease and quick share of educational material, improved collaboration and interactivity among students, and quick feedback between the learners and the instructors.

**Research Question Two:** What are the challenges of the virtual teaching-learning process during the covid-19 pandemic as perceived by history education students in Kwara State?

**Table 4: Mean and Rank Order of Respondents' Perception of Challenges of Virtual Teaching-Learning Process During Covid-19 Pandemic**

| N | The challenges of virtual teaching-learning include: | Mean | SD    | Rank            |
|---|--|------|-------|-----------------|
| 1 | Lack of connectivity                                 | 2.83 | .977  | 1 <sup>st</sup> |
| 2 | Eclectic power supply                                | 2.73 | .987  | 2 <sup>nd</sup> |
| 6 | Lack of computer/phone device                        | 2.71 | 1.034 | 3 <sup>rd</sup> |
| 3 | Lack of money to buy data                            | 2.55 | 1.076 | 4 <sup>th</sup> |
| 4 | Data limit   | 2.46 | 1.009 | 5 <sup>th</sup> |
| 7 | Technophobia   | 1.97 | 1.076 | 6 <sup>th</sup> |
| 5 | Low data speed                                       | 1.95 | 1.035 | 7 <sup>th</sup> |

Table 4 shows that the respondents indicated 5 out of the 7 items as challenges of the virtual teaching-learning process during the Covid-19 pandemic. This is because the items have mean scores that are above the average mean values of 2.50 (benchmark) for determining the significant challenges of the virtual teaching-learning process. In this regard, items 1, 2, 6, 3 and 4 with mean values of 2.83 (with standard deviation .977), 2.73 (with standard deviation .987), 2.71 (with standard deviation 1.034), 2.55 (with standard deviation 1.076) and 2.46 (with standard deviation 1.009) were ranked between 1<sup>st</sup> and 5<sup>th</sup> respectively. Thus, the topmost challenges of the virtual teaching-learning process, as indicated by the history education students in Kwara State, are lack of connectivity, epileptic power supply, lack of computer/phone device, lack of money to buy data and data limit.

**Research Question 3:** What is the level of the respondents' willingness to further use of virtual teaching-learning process after the pandemic?

**Table 5: Mean and Percentage Distribution of Respondents' Level of Willingness to Adopt Virtual Teaching-Learning Process after the Covid-19 Pandemic**

| N | I believe,   | SA        | A          | D         | SD        | Mean | SD    |
|---|--|-----------|------------|-----------|-----------|------|-------|
| 1 | I intend to use virtual learning to improve my knowledge   | 54(23.0)  | 115 (48.9) | 34 (14.5) | 32 (13.6) | 2.81 | .942  |
| 2 | I intend to use virtual learning to get updated on my subject knowledge with the latest amendments | 53 (22.6) | 97 (41.3)  | 45 (19.1) | 40 (17.9) | 2.69 | 1.004 |
| 3 | I intend to use virtual learning as an autonomous (free) learning tool                             | 52 (22.1) | 99 (42.1)  | 41 (17.4) | 43 (18.3) | 2.68 | 1.015 |
| 4 | I intend to share more knowledge with my classmate through virtual learning                        | 40 (17.0) | 91 (38.7)  | 58 (24.7) | 46 (19.6) | 2.53 | .993  |
| 5 | I intend to interact more with my lecturers through virtual learning                               | 32 (13.6) | 67 (28.5)  | 52 (22.1) | 84 (35.7) | 2.20 | 1.073 |

*Note: All values in parentheses ( ) are in percentage*

Table 5 reveals that the respondents' level of willingness to further adopt the virtual teaching-learning process after the covid-19 pandemic is high. This is indicated by the percentage distribution of the items that skewed to the left side (between "Agree = A" and "Strongly Agree = SA" responses) of the table. Because all the items are worded in positive forms, the skewness of responses to the left side indicates agreement to the items on their level of willingness to use the virtual teaching-learning process. The mean values that are above the 2.5 benchmark average also indicated a similar high level of willingness among the respondents. It is inferred in this regard that, there is a high level of willingness among history education students to use the virtual teaching-learning process after the Covid-19 pandemic.

**H<sub>01</sub>:** There is no significant difference in the perception of male and female history education students on virtual teaching-learning during the covid-19 pandemic in Kwara State.

**Table 6: Independent t-test Result on Perception of History Education Students on Virtual Teaching-Learning During Covid-19 Pandemic in Kwara State Based on Gender**

| Gender | N   | Mean  | SD    | df  | Cal. t | p-value |
|--------|-----|-------|-------|-----|--------|---------|
| Male   | 123 | 52.96 | 7.486 | 233 | .876   | .382    |
| Female | 112 | 53.79 | 7.095 |     |        |         |

Table 6 shows that at the degree of freedom (df) of 233, the calculated t-value of .876( $p = .382 > .05$ ) is statistically not significant. This means that there is no significant difference in the perception of male and female history education students on the virtual teaching-learning process during the Covid-19 pandemic in Kwara State; hence, the hypothesis was rejected. The result is an indication that both male and female have the same perception about virtual teaching-learning process during the Covid-19 pandemic in Kwara State.

**H<sub>02</sub>:** There is no significant difference in the perception of history education students on virtual teaching-learning during the covid-19 pandemic in Kwara State based on age.

**Table 7: ANOVA Result on Perception of History Education Students on virtual Teaching-Learning During Covid-19 Pandemic in Kwara State Based on Age**

| Source        | Sum of Squares | df  | Mean Squares | Cal. F | p-value |
|---------------|----------------|-----|--------------|--------|---------|
| Between group | 22.560         | 2   | 11.280       | .210   | .810    |
| Within group  | 12443.415      | 232 | 53.635       |        |         |
| Total         | 12465.974      | 234 |              |        |         |

Table 7 shows that at the degrees of freedom (df) of 2 and 232, the calculated F-value of .210( $p = .810 > .05$ ) is statistically not significant. This means that there is no significant difference in the perception of history education students on the virtual teaching-learning process during the Covid-19 pandemic in Kwara State based on age; hence, the hypothesis was rejected. The result implies that age does not have an effect on the perception of male and female students on virtual teaching-learning process during Covid-19 in Kwara State. **H<sub>03</sub>:** There is no significant difference in the perception of history education students on virtual teaching-learning during the Covid-19 pandemic in Kwara State based on level of study.

**Table 8: ANOVA Result on Perception of History Education Students on Virtual Teaching-Learning During Covid-19 Pandemic in Kwara State Based on Level of Study**

| Source        | Sum of Squares | df  | Mean Squares | Cal. F | p-value |
|---------------|----------------|-----|--------------|--------|---------|
| Between group | 1213.580       | 2   | 61.790       | 1.161  | .315    |
| Within group  | 12342.394      | 232 | 53.200       |        |         |
| Total         | 12465.974      | 234 |              |        |         |

Table 8 shows that at the degrees of freedom (df) of 2 and 232, the calculated F-value of 1.161( $p = .315 > .05$ ) is statistically not significant. This means that there is no significant difference in the perception of history education students on the virtual teaching-learning process during the Covid-19 pandemic in Kwara State based on the level of study; hence, the hypothesis was rejected. The result is an indication that level of study does not have any significant impact on the perception of students on virtual teaching-learning process during the period of Covid-19.

## Discussion

The main finding of this study revealed that the key benefits of the virtual teaching-learning process, as indicated by the history education students in Kwara State, were flexibility and time convenient to the learner, accommodating different types of learning styles, ease and quick share of educational material, improved collaboration and interactivity among students, and quick feedback between the learners and the instructors. The finding of this study supports the findings of Khan, Vivek, Khojah and Tahir (2021); Muthuprasad, Aiswarya, Aditya and Jha (2021); Baczek, Zaganczyk-Baczek, Szpringer, Jaroszynski and Wozakowska-Kapłon (2021) whose findings identified easy access to online materials, the ability of learners to study at their own pace and convenient and fast feedback between the instructors and the students. The findings imply that the students believe, that to some extent, the virtual teaching-learning process has enabled them to continue with their study despite lock-down caused by the Covid-19 pandemic. This suggests that history education students have a positive perception of the importance of the virtual instructional process. Perhaps, comfortability and free interaction with lecturers could have informed the students' positive perception of the virtual teaching-learning process.

The finding also revealed that the main challenges of the virtual teaching-learning process, as indicated by the history education students in Kwara State, are lack of connectivity, epileptic power supply, lack of computer/phone device, lack of money to buy data and data limit. In support of this finding, Aiyedun, Ogunode and Eyiolorunse (2021) have indicated poor ICT facilities, lack of funding, eclectic power supply and poor internet services as some of the challenges of the virtual teaching-learning approach in the public universities in Nigeria. Muthuprasad, Aiswarya, Aditya and Jha (2021); Almahasees, Mohsen and Amin (2021) reported online connectivity issues and data limits as barriers to the teaching-learning process. In contrast, the finding of Iseolorunkanmi, Adebola, Adebola, Rotimi, Nweke-Love, Adebisi and Lawal (2021) showed that the presence of infrastructures aids the virtual learning in the private universities studied. The finding of this study suggests that there are a lot of problems that need to be addressed to effectively implement or integrate the virtual teaching-learning process into the education system. For instance, lack of connectivity and epileptic power supply has been some of the challenges in the Nigerian tertiary institutions. Many of these citadels of learning lack effective internet connection and stable power supply.

The result of this study also indicated that despite the challenges of the virtual teaching-learning approach, the respondents still show a high level of willingness to further use the virtual instructional process for learning after the Covid-19 pandemic. This finding implies that the respondents' perceptions of the benefits of the virtual teaching-learning process outweigh the challenges they noted; thus, their high willingness level to further use the online instructional process. This finding supports the study by Khan, Vivek, Nabi, Khojah and Tahir (2021) whose results revealed the students' acceptance of internet-based learning. This finding may as well suggest that the virtual teaching-learning process has contributed positively to their academic achievement; hence, their willingness to further use virtual learning.

The independent t-test result revealed that there was no significant difference in the perception of male and female history education students on the virtual teaching-learning process during the Covid-19 pandemic in Kwara State. This means that the male and female respondents' perception is similar on the virtual teaching-learning process during the Covid-19 pandemic. This finding agrees with the study of Bast (2021) whose finding revealed that there is no significant difference in the respondents' perception of online learning based on gender. The similarity of this current finding with the previous study, perhaps, result from the fact that both studies were conducted among students of higher learning whose demographic characteristics are likely to be similar. In contrast, this finding disagrees with the finding of Iseolorunkanmi, Adebola, Adebola, Rotimi, Nweke-Love, Adebisi and Lawal (2021) which revealed that there is no gender difference in the respondents' perception of the virtual orientation. The previous finding is different from this current one because it was conducted among lecturers in private universities in Nigeria. The finding of this



study suggests that the virtual teaching-learning process is appealing to both male and female students should all the barriers to its effectiveness be addressed.

The ANOVA result revealed that there was no significant difference in the perception of history education students on the virtual teaching-learning process during the Covid-19 pandemic in Kwara State based on age. This means that variation in the respondents' age did not influence their perception of the virtual teaching-learning process. The finding of this study concurs with the study of Neves, Waycott and Malta (2018) whose finding noted that age difference has no significant contribution to the students' perception of online learning during the pandemic. Consistent of this finding with the previous study could have been because the respondents in the studies were within a similar age range and the study locales were similar in their level of economic development. On the other hand, this finding opposed the finding of Bast (2021) whose study reported that there is an age gap in the students' perception of the e-learning process in the pandemic. Perhaps, the demographic attributes of the respondents in the two studies were different as well as their locales. This current finding suggests that people's perceptions might not be necessarily influenced by their age categories.

The ANOVA result further revealed that there was no significant difference in the perception of history education students on the virtual teaching-learning process during the covid-19 pandemic in Kwara State based on the level of study. The finding means that the study variation in the level of study did not influence their perception of the virtual teaching-learning process. This finding is in line with the study of Harefa and Sihombing (2021) who revealed that the students' level of study has no influence on their perception of the online learning process amidst the Covid-19 pandemic. The similarity in the result of this study and the past literature, perhaps, is evident in the fact that they were conducted with the same locale and among respondents of a similar level of study.

## **Conclusion**

It was concluded based on the findings of this study, that history education students have a positive perception of the virtual teaching-learning process as they considered it beneficial and they are willing to further adopt the virtual learning approach in the post-Covid period despite some challenges it poses. Also, the respondents' demographic features played no role in their perception of the virtual teaching-learning process. The virtual teaching-learning process can thus be made an integral part of teaching and learning of history education to comply with the global trends and for effective achievement of the overall aims and objectives of history education in Nigeria.

## **Recommendations**

In line with the findings of this study, it is recommended that government and curriculum planners should integrate the virtual teaching-learning approach into the classroom instructional process so that both the students and their lecturers can become more acquainted with the use of ICT and be able to explore the benefits embedded in its usage for achieving academic success.

Also, government, in collaboration with the authority of tertiary institutions and the network providers such as MTN, Glo, Airtel, etc. should supply tertiary institutions with effective internet facilities, stable power supply, ICT facilities and funds so that they can effectively use the virtual teaching-learning approach to fit with global educational trends and achieve national goals of education.

In addition, government, authority of tertiary institutions and parents should support students financially, to enable them procure appropriate devices and data to access the internet; and educate them on how to make use of these gadgets to enhance their willingness and engagement in the use of the virtual teaching-learning process.

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