

# Perceived Determinants of Continuous Usage of Digital Pedagogy among Academic Staff in a Resource-Constrained University in the Post-COVID-19 Era

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## **Abstract**

*No doubt, the COVID-19 pandemic has reinforced the indispensability of digital pedagogy utilisation, especially in institutions of higher learning. However, its continuous usage has to be investigated since it is difficult to predict the outcome of an educational landscape in a post-COVID-19 era. Accordingly, this study investigated some perceived factors, i.e. ease of use, usefulness, satisfaction and affordability, in relation to continuous usage of digital pedagogy among academic staff in a resource-constrained university in the post-COVID-19 era, using the University of Lagos, Akoka as a case study. The descriptive survey research design was used, with four null hypotheses and one research question guiding the study. The study population comprised all 1736 members of academic staff, out of which 130 were selected through the stratified random sampling technique. A self-designed, validated and reliable instrument ( $r=.88$ ) labelled “Perceived Determinants of Continuous Usage of Digital Pedagogy Questionnaire (PDCUDPQQ)” was used for data collection. The data were analysed using Chi Square, Pearson Product-Moment Correlation and Multiple Regression. Findings showed that continuous usage of digital pedagogy was significantly influenced by perceived ease of use and perceived usefulness. Perceived satisfaction and perceived affordability also significantly related to continuous usage of digital pedagogy. This implies that academic staff members are ready to use digital pedagogy in the long term. In the light of the findings, it is recommended that all the selected factors should be taken into consideration while motivating academic staff to engage in continuous usage of digital pedagogy in their teaching-learning activities.*

**Keywords:** digital pedagogy, perceived ease of use, perceived usefulness, perceived satisfaction, perceived affordability, continuous usage

## **Introduction**

Sometime in December 2019, news spread all over the world on the outbreak of a deadly virus called Coronavirus (code-named COVID-19) in the city of Wuhan,

the capital of Hubei, China. Although COVID-19 is a typical global health crisis, its continuous spread has significantly altered the world, leading to radical changes in social interaction and association, including in the education sector. Thus, the continuous spread of COVID-19 comes with extensive disruptions to normal life, including temporary closure of educational institutions, leaving around 1.6 billion children and youth out of school worldwide. School closure was deemed necessary as part of efforts to flatten the infection curve and limit fatalities from the disease. According to Weeden and Cornwell (2020), the COVID-19 pandemic precautions marked by 'social distancing' or 'physical separating' were meant to limit interpersonal contact and thus curb community transmission, especially in dense informal communities like educational campuses.

Many educational institutions in the developed world were able to migrate to digital platforms for the delivery of instruction to students, who were at home. The scenario was not quite the same, however, for those in low-and middle-income countries, including Nigeria, where there seems to be little or no readiness in terms of adequate provision of necessary technological infrastructure. In fact, behavioural intentions, otherwise known as user motivation of academic staff to engage students in digital pedagogy, are also questionable. This is not unconnected with the fact that Sub-Saharan Africa is reported to be one of the economies lagging behind in digital technology (Rice, 2003).

The disruptions caused by the COVID-19 pandemic to learning have forced the emergence of alternative, complementary modes of instructional delivery. Consequently, many resource-constrained educational institutions have considered varying learning styles and teaching skills. One manifestation of this shift is engaging digital technologies for students' learning tasks.

In fact, digital engagement has become an expectation for learners and likewise universities. The present challenge for academic staff is how to embrace a novel critical perspective of digital thought in connection with their students' learning. The fact is that while learners are busy with computerised teaching techniques, teachers are involved in creating the pedagogical landscape and "... the teaching or learning processes ends up in distinguishing the paradigms of pedagogy" (Alfuqaha, 2013: 40, cited in Šūpulniece, Boguševiča, Petrakova & Grabis, 2013). Similarly, Kinchin (2012: 45), cited in Šūpulniece et al., 2012), observed thus: "It is, however, the pedagogy (consisted of values, beliefs, theories, and suppositions) that drives teaching and not the other way around." Thus, it

is up to the teacher to reflect and act critically with respect to pedagogical decisions.

Pedagogical decisions regarding the behavioural intentions to adopt digital technologies, otherwise known as user motivation, are influenced by certain factors. Chuttur (2009) submitted that three key determinants of user motivation are Perceived Usefulness (PU), Perceived Ease Of Use (PEOU) and Attitude Towards Use. Davis, Bagozzi and Warshaw (1989) described perceived usefulness as the extent to which an individual accepts that using a specific system would improve their productivity. They also described perceived ease of use as the extent to which an individual accepts that using a specific system would be free of effort. Finally, they noted that users' attitude towards the system will determine whether they will use or reject the system. The disposition of the client is viewed as affected by Perceived Usefulness and Perceived Ease Of Use (Chuttur, 2009). With the remarkable development of the Internet and a resulting change in the educational scenery, there is need to understand user acceptance and utilisation of digital technologies (Yuen & Ma, 2008). In other words, investigating digital pedagogy has become highly imperative.

Digital pedagogy is a recent concept in the field of education. Digital pedagogy is not about the technology as such, despite the fact that digital delivery requires technology. It is about the manner in which the instructor needs to educate and the manner in which learners need to learn, both processes being expedited by technology. In other words, the ordinary use of technological devices in the lecture room is not the same as engaging in digital pedagogy (Downes, 2011).

According to University of Toronto Libraries (2013), Brian Croxall, in his introduction to the MLA Digital Pedagogy Conference, submitted that a few specialists in the investigation of computerised instructional method contended that the fact that one is utilising digital technology in one's teaching does not imply that one is rehearsing digital pedagogy, particularly in the event that one is not reflecting on pedagogical change. Digital pedagogy refers to the utilisation of digital elements to upgrade or to change the educational experience (Downes, 2011). It can therefore be submitted that digital pedagogy is the application and utilisation of contemporary digital technologies to effect educational experience in diverse learning environments such as online, hybrid and face-to-face.

The various studies reviewed here suggest that little is known about research exploring the acceptance and possible continuous utilisation of digital technologies for digital pedagogy in resource-strained tertiary institutions. Based

on this, more studies on this area are required to decide whether low selection issues of digital technologies are brought about by convenience issues (Šūpulniece et al., 2013). The observed failure in the adoption of digital technologies supports the call for more studies on the perceived determinants of digital pedagogy, especially in resource-strained tertiary institutions. Consequently, extending the frontier of knowledge in this direction informed the decision to interrogate the perceived determinants of continuous usage of digital pedagogy among academic staff in a resource-constrained university in the post-COVID-19 era.

### **Statement of the Problem**

The COVID-19 pandemic has reinforced the indispensability of the application of information technology tools in instructional delivery through the use of digital technologies, especially in higher educational institutions. All stakeholders have come to accept that instructional delivery has to be digitised. In education, digital technologies have led to the discovery of novel pedagogical techniques which, it is hoped, will allow students to assume more dynamic roles than previously. Digital technologies provide opportunities that encourage mixed, online and portable learning. In spite of these possibilities, however, little or nothing is known with regard to their consistent use in resource-strained educational institutions.

Here, it is argued that continuous usage of digital technologies, which will ensure its sustainability, has to be investigated since it is difficult to predict what the educational landscape will look like in the post-COVID-19 era. Within the context of this study, continuous usage of digital pedagogy is taken to mean habitual usage. It is argued that continuous usage of digital pedagogy will eventually become habitual, hence the need to emphasise the concept of habit in this study. As an abstract and socially defined concept, there can be no objectively ‘correct’ or ‘incorrect’ definition of habit (West & Brown, 2013). However, Gardner (2013) observed that the term ‘habit’ is widely used to predict and explain behaviour. Although used in everyday parlance to refer to frequent, persistent or customary behaviour, within health psychology ‘habit’ is defined as a phenomenon whereby behaviour is prompted automatically by situational cues, as a result of learned cue-behaviour associations (Wood & Neal, 2007). Habitual behaviour may thus be broadly defined as “any action, or sequence of actions, that is controlled by habit” (Gardner, 2013: ...). From this definition, it can as well be submitted that habitual usage or behaviour refers to continuous use of a particular thing after initial usage. In view of this, continuous usage of digital

pedagogy refers to the habitual use of digital pedagogy in the post-COVID-19 era, having adopted and used it in COVID times.

As the literature shows, much investigation has been done on the adoption or acceptance of digital technologies. However, it seems that their continuous utilisation has not received much attention. To bridge this gap and ensure the sustainability of digital pedagogy, this study examined factors influencing the continuous use of digital pedagogy, focusing on ease of use, usefulness, satisfaction, enjoyment and affordability as perceived determinants of continuous usage of digital pedagogy among academic staff in a resource-constrained university in the post-COVID-19 era. The case study was the University of Lagos, Akoka, Nigeria.

### **Purpose of the Study**

The study has the following objectives:

- i. to determine the influence of perceived ease of use on continuous usage of digital pedagogy;
- ii. to examine the influence of perceived usefulness on continuous usage of digital pedagogy;
- iii. to find out the relationship between perceived satisfaction and continuous usage of digital pedagogy;
- iv. to examine the relationship between perceived affordability and continuous usage of digital pedagogy; and
- v. to determine the combined and relative contributions of the perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability to the prediction of continuous usage of digital pedagogy among academic staff.

### **Null Hypotheses**

The following null hypotheses were formulated and tested in the study based on the specific objectives:

- H0<sub>1</sub>:** Perceived ease of use does not significantly influence continuous usage of digital pedagogy.
- H0<sub>2</sub>:** Perceived usefulness and continuous usage of digital pedagogy are not significantly associated.
- H0<sub>3</sub>:** There is no significant relationship between perceived satisfaction and continuous usage of digital pedagogy.
- H0<sub>4</sub>:** There is no significant relationship between perceived affordability and continuous usage of digital pedagogy.

### **Research Question**

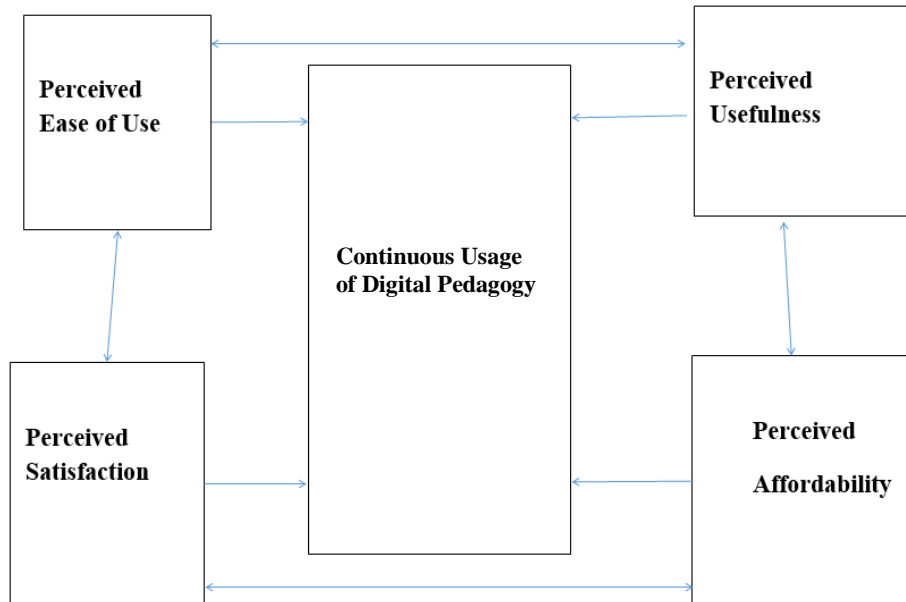
A research question was raised and answered with a view to achieving the last specific objective of the study.

**Research Question:** What are the combined and relative contributions of perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability to the prediction of continuous usage of digital pedagogy among academic staff?

### **Theoretical Framework**

The Technology Acceptance Model (TAM) is one of the most prevalent theories in the field of digital technologies and the most widely used model which influences technology acceptance (Lee et al., 2003; Park, 2009). It was at first evolved to test the acknowledgment of word-processor technology, wherein it was postulated that user motivation is a noteworthy construct in clarifying and anticipating framework use (Davis et al., 1989). Throughout the years, however, it has been applied in various other areas.

Evolved from the Theory of Reasoned Action (TRA), according to Ajzen and Fishbein (1980), is TAM, which focuses on the obstructions and drivers to the selection of new technologies in a particular domain (Al Nahian Riyadh et al., 2009). The credibility of TAM has been scientifically demonstrated in various past investigations (Stantchev et al., 2014). In this paper, factors affecting the use of technology from TAM were identified and used as the basis for factors that could affect continuous usage of digital technologies in a resource-constrained university. A new conceptual model is as shown in Figure 1.



**Figure 1: Conceptual Model of Perceived Determinants of continuous Usage of Digital Pedagogy**

The conceptual model shown in Figure 1 clearly indicates that each of the selected determinants, i.e. perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability, jointly and individually predict the continuous usage of digital pedagogy among academic staff. This is also depicted by the formulated null hypotheses.

### **Assumptions**

Two assumptions were made in this study. Firstly, it was assumed that members of the academic staff have positive attitudes toward using digital technologies for pedagogical purpose. Secondly, it was assumed that they have been involved in actual usage of digital pedagogy. Therefore, focus was on those factors that will motivate them to continuously use digital pedagogy in their teaching activities, especially during the post-COVID-19 era.

### **Methodology**

The procedure for conducting this investigation is discussed in this section.

### **Research Design**

The descriptive survey research design was used for this investigation. It was considered appropriate because it helps in collecting data from a large study

population with a view to depicting the current situation, paying close attention to a unit (Oladejo, 2017).

### **Population of the Study**

The study population was comprised by all the 1736 members of academic staff at the University of Lagos, Akoka as at the 2017/2018 academic session. This figure is made up of 253 Professors, 135 Associate Professors, 372 Senior Lecturers, 310 Lecturers I, 265 Lecturers II, 193 Assistant Lecturers and 208 Graduate Assistants.

### **Sample and Sampling Techniques**

The sample size comprised 130 lecturers, selected through probability sampling, specifically the stratified random sampling technique. The university was stratified into Faculties, five of them randomly selected. These Faculties were later stratified into Departments. Random sampling was used to select 10 out of 28 Departments. Subsequently, 13 members of academic staff were randomly selected from each of the 10 Departments. As such, a total of 130 lecturers constituted the sample size of the study.

### **Research Instrument**

A self-structured, validated and reliable instrument ( $r=.88$ ) tagged “Perceived Determinants of Continuous Usage of Digital Pedagogy Questionnaire (PDCUDPQQ)” was utilised to collect data. The instrument had two sections. While Section A is on the demographic background of the participants, e.g. gender, job status, department and faculty, Section B gives information on each of the selected explanatory factors. Each of these factors has four items. The items of the survey were scored on a 4-point modified Likert-type scale comprising Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D) with weights of 4, 3, 2 and 1 respectively. The scoring was turned around for negative items for the purpose of analysis.

### **Validity and Reliability of the Instrument**

Copies of the draft instrument were given to some senior colleagues in Measurement and Evaluation for expert opinions regarding content, construct and face validity. Each of the sub-scales from the outset had between six to eight items. However, the final draft consisted of four items each following appropriate adjustments and suggestions. Thereafter, the instrument was pilot-tested at the Lagos State University (LASU) using a sample of 40 lecturers to estimate the reliability of the instrument. According to Perneger et al. (2015), a minimum sample size of 30 respondents is recommended to yield meaningful results from a



pre-test. The internal consistency type of determining reliability, specifically Cronbach's  $\alpha$  values, was used. The obtained overall alpha value was .88, which implies that all constructs exhibited a high internal consistency with their corresponding measurement indicators.

**Method of Data Analysis**

Data obtained were analysed using inferential statistical tools. Specifically, hypotheses one and two were tested with Pearson Chi Square, while hypotheses three and four were tested with Pearson Product-Moment Correlation. The only research question in the study was answered with Multiple Regression Analysis (MRA). All the formulated hypotheses were tested at a .05 level of significance.

**Data Analysis, Findings and Discussions**

This section presents the data analysis as well as the findings of the study and discussions.

**H0<sub>1</sub>:** Perceived ease of use does not significantly influence continuous usage of digital pedagogy.

**Table 1: Influence of Perceived Ease of Use on Continuous Usage of Digital Pedagogy**

| Variable                             | Mean      | SD          | N | df | $\chi^2$ | p   | Remark | Decision                       |
|--------------------------------------|-----------|-------------|---|----|----------|-----|--------|--------------------------------|
| Perceived Ease Of Use                | 14.312.57 | 13025242.56 |   |    | .000     | Sig |        | Fail to Accept H0 <sub>1</sub> |
| Continuous Usage of Digital Pedagogy | 13.94     | 2.50        |   |    |          |     |        |                                |

A Pearson Chi Square Correlation was run to determine the influence of perceived ease of use on continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Table 1 shows statistically that [ $\chi^2$  (25, N = 130) = 242.56,  $p < .05$ ]. This means that there was significant influence of perceived ease of use on continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Therefore, the researcher could not accept the hypothesis states that there is no significant influence of perceived ease of use on continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka.

**H0<sub>2</sub>:** Perceived usefulness and continuous usage of digital pedagogy are not significantly associated.

**Table 2: Association between Perceived Usefulness and Continuous Usage of Digital Pedagogy**

| Variable                             | Mean      | SD     | N | df | $\chi^2$ p | Remark                         | Decision |
|--------------------------------------|-----------|--------|---|----|------------|--------------------------------|----------|
| Perceived Usefulness                 | 15.462.54 |        |   |    |            |                                |          |
|                                      | 13025     | 365.66 |   |    | .000Sig    | Fail to Accept H0 <sub>2</sub> |          |
| Continuous Usage of Digital Pedagogy | 13.94     | 2.50   |   |    |            |                                |          |

A Pearson Chi Square Correlation was run to determine the association between perceived usefulness and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Table 1 shows statistically that [ $\chi^2$  (25, N = 130) = 365.66,  $p < .05$ ]. This means that there was significant association between perceived usefulness and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Therefore, the researcher failed to accept the hypothesis postulating that perceived usefulness and continuous usage of digital pedagogy are not significantly associated among academic staff of the University of Lagos, Akoka.

**H0<sub>3</sub>:** There is no significant relationship between perceived satisfaction and continuous usage of digital pedagogy.

**Table 3: Relationship between Perceived Satisfaction and Continuous Usage of Digital Pedagogy**

| Variable                             | Mean      | SD       | N | df | r       | p                             | Remark |
|--------------------------------------|-----------|----------|---|----|---------|-------------------------------|--------|
| Perceived Satisfaction               | 13.032.26 |          |   |    |         |                               |        |
|                                      | 130       | 138 .485 |   |    | .000Sig | Fail to AcceptH0 <sub>3</sub> |        |
| Continuous Usage of Digital Pedagogy | 13.94     | 2.50     |   |    |         |                               |        |

A Pearson Product-Moment Correlation was run to determine the relationship between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Table 1 shows a moderate, positive and significant relationship between the two constructs: ( $r=.485$ ,  $df=128$ ,  $p<.05$ ). This means that there was significant association between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Therefore, the researcher failed to accept the

hypothesis stating that there is no significant relationship between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka.

**H0<sub>4</sub>:** There is no significant relationship between perceived affordability and continuous usage of digital pedagogy.

**Table 4: Relationship between Perceived Affordability and Continuous Usage of Digital Pedagogy**

| Variable                             | Mean   | SD   | N   | df  | r    | P    | Remark | Decision                       |
|--------------------------------------|--------|------|-----|-----|------|------|--------|--------------------------------|
| Perceived Affordability              | 11.163 | 1.13 | 130 | 128 | .329 | .000 | Sig    | Fail to Accept H0 <sub>4</sub> |
| Continuous Usage of Digital Pedagogy | 13.94  | 2.50 |     |     |      |      |        |                                |

A Pearson Product-Moment Correlation was run to determine the relationship between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Table 1 shows a weak, positive but significant relationship between the two constructs ( $r=.329$ ,  $df=128$ ,  $p<.05$ ). This means that there was significant association between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka. Therefore, the researcher failed to accept the hypothesis stating that there is no significant relationship between perceived affordability and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka.

#### Answering the Research Question

Answer to the only research question in the study is as provided in Table 5.

**Research Question Five:** What are the combined and the relative contributions of perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability to the prediction of continuous usage of digital pedagogy among academic staff?

**Table 5: Regression Analysis of the Perceived Factors on Continuous Usage of Digital Pedagogy**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .613 <sup>a</sup> | .376     | .357              | 2.00379                    | 1.424         |

- a. Predictors: (Constant), Perceived Ease Of Use, Perceived Usefulness, Perceived Satisfaction, and Perceived Affordability  
 b. Dependent Variable: Continuous Usage of Digital Pedagogy

As Table 6 shows, the four selected explanatory factors have positive multiple correlation with continuous usage of digital pedagogy among academic staff ( $R = .613$ ). Also, the adjusted R square value of .357 indicated that the four selected variables jointly contributed 35.7% to the variance, that is, continuous usage of digital pedagogy among academic staff. By implication, the remaining 64.3% was due to residuals, which are factors outside the scope of this study. Be that as it may, in order to decide if the Adjusted R square value got above is significant, the Analysis of Variance (ANOVA) was performed as shown in Table 7.

**Table 6: Regression Analysis of the Perceived Factors on the Dependent Variable**

| Model      | Sum of Squares | Df  | Mean Square | F      | Sig.              |
|------------|----------------|-----|-------------|--------|-------------------|
| Regression | 307.586        | 4   | 76.897      | 19.151 | .000 <sup>b</sup> |
| Residual   | 509.929        | 127 | 4.015       |        |                   |
| Total      | 817.515        | 131 |             |        |                   |

Dependent Variable: Continuous Usage of Digital Pedagogy  
 Predictors: (Constant), Perceived Ease Of Use, Perceived Usefulness, Perceived Satisfaction, and Perceived Affordability

From Table 7, the F-value of 19.151 at degrees of freedom (4, 127) was significant at 0.000 ( $p < .05$ ). Based on this, there was significant combined contribution of the selected factors to the dependent variable.

**Table 7: Relative Contributions of the Perceived Factors to the Variance in Continuous Usage of Digital Pedagogy**

| Model                   | Unstandardised |            | Standardised     | T     | Sig. |
|-------------------------|----------------|------------|------------------|-------|------|
|                         | Coefficients   |            | Coefficients     |       |      |
|                         | B              | Std. Error | Beta ( $\beta$ ) |       |      |
| (Constant)              | 2.013          | 1.391      |                  | 1.448 | .150 |
| Perceived Ease Of Use   | .161           | .081       | .166             | 1.993 | .048 |
| Perceived Usefulness    | .243           | .077       | .246             | 3.154 | .002 |
| Perceived Satisfaction  | .349           | .090       | .316             | 3.887 | .000 |
| Perceived Affordability | .119           | .060       | .149             | 1.977 | .050 |

Dependent Variable: Continuous Usage of Digital Pedagogy

Table 7 shows that each of the selected variables, i.e. perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability, contributed differentially to the variance in continuous usage of digital pedagogy among academic staff. The relative contributions of the explanatory variables in order of importance are as follows: perceived satisfaction ( $\beta=.316$ ), perceived usefulness ( $\beta=.246$ ), perceived ease of use ( $\beta=.166$ ) and perceived affordability ( $\beta=.149$ ). All their contributions were also significant.

### Discussions of Findings

Findings from the tested null hypothesis one showed that there was a significant influence of perceived ease of use on continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka: [ $\chi^2 (25, N = 130) = 242.56, p < .05$ ]. This finding is similar to that of Al-Emran, Arpaci and Salloum (2020), who investigated persistent intention to utilise m-learning among 273 postgraduate students of The British University in Dubai, where it was established that perceived ease of use significantly predicted the persistent utilisation of m-learning. Phua, Wong and Abu (2011) also researched the behavioural intention (BI) of Home Economics (HE) instructors to utilise the Internet as a teaching apparatus. Their discoveries were that HE instructors' BI to utilise the Internet was positively related to Perceived Ease of Use: ( $n=106, r = .54, p < .0005$ ).

In the tested second null hypothesis, it was revealed that there was significant association between perceived usefulness and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka: [ $\chi^2 (25, N = 130) = 365.66, p < .05$ ]. Findings from this study corroborate those of Lee and Thi (nd), who examined the impact of organisational factors on the intention to use

big-data technologies. They found that perceived usefulness has stronger influence on Behaviour Intention to Use Big Data Technologies. In the same vein, Phua, et al. (2011) confirmed that HE teachers' BI to use the Internet was positively correlated: PU ( $n=106$ ,  $r = .63$ ,  $p<.0005$ ).

However, Al-Emran et al. (2020) reported a different finding when they investigated persistent intention to utilise m-learning among 273 postgraduate students of The British University in Dubai. They found that perceived usefulness had an insignificant influence on persistent intention to utilise m-learning.

Furthermore, in the present study, a significant relationship was found between perceived satisfaction and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka: ( $r=.485$ ,  $df=128$ ,  $p<.05$ ). This result negates the finding in Al-Emran et al. (2020), which showed that perceived satisfaction had an insignificant relationship with persistent intention to utilise m-learning. Similarly, Ashrafi et al. (2020) reported that perceived students' satisfaction level exerted no significant influence on continuance intention.

There was significant relationship between perceived affordability and continuous usage of digital pedagogy among academic staff of the University of Lagos, Akoka: ( $r=.329$ ,  $df=128$ ,  $p < .05$ ). This is a new discovery as far as the researcher is concerned, given that perceived affordability is an extension to the original TAM model used in the conceptual model for the study.

The adjusted R square value of .357 indicated that the four selected variables jointly contributed 35.7% to the variance, that is, continuous usage of digital pedagogy among academic staff. Their joint contribution was significant, given that the F-value of 19.151 at degrees of freedom (4, 127) had  $p<.05$ . This implies that the selected factors should be given utmost importance, if academic staff must continue using digital pedagogy in the post-COVID-19 era. Some previous studies (Al-Emran et al, 2020; Ashrafi et al., 2020; Phua et al., 2011) confirmed this result.

Finally, it was shown in this study that each of the selected variables, i.e. perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability, contributed differently and significantly to continuous usage of digital pedagogy among academic staff. Their relative contributions in order of importance are as follows: perceived satisfaction ( $\beta=.316$ ), perceived usefulness ( $\beta=.246$ ), perceived ease of use ( $\beta=.166$ ) and perceived affordability ( $\beta=.149$ ). This finding negates that of Ashrafi et al. (2020), which investigated factors

determining students' persistent intention to utilise the Learning Management System (LMS) and reported that perceived usefulness was the most powerful predictor of students' persistent intention. In addition, perceived satisfaction had no significant influence on persistent intention. However, the present finding aligns with that of Oladejo et al. (2017), which confirmed that perceived usefulness ( $\beta=.304$ ) and perceived ease of use ( $\beta=.123$ ) relatively contributed significantly to the prediction of behavioural intention to adopt and continuously use mobile learning among Nigerian Students With Disabilities (SWDs).

### **Conclusion**

This study found that, in education, digital technologies have led to the emergence of novel pedagogical techniques that, it is hoped, will allow students to assume more dynamic roles than they previously did. In a fast-changing and interconnected world, it is fundamental for education systems to furnish instructors with sufficient capabilities to adapt to social and expert realities in the 21st Century. This study found that all the selected factors, i.e. perceived ease of use, perceived usefulness, perceived satisfaction and perceived affordability, are potential factors that are capable of motivating academic staff to engage in continuous usage of digital pedagogy. Consequently, there is need to focus on the critical issues of how individuals teach and learn in an electronic context. Since digital pedagogy is indispensable in educational practice today, stakeholders in education should commit to ensuring its sustainability.

### **Policy Imperatives**

The following policy imperatives emanated from the findings of the study:

- i. There is need for regular training of staff on digital pedagogy, as a matter of policy. In other words, it is imperative to have policy support and leadership that involves the emergence of a broader vision for the utilisation of digital technologies in education and teacher's continuous preparation.
- ii. There is need for regular policy-relevant assessment of digital pedagogy utilisation which would be aimed at ensuring that the incorporation of digital technologies prompts organisational and practical change. Knowledge from effective innovations should be documented and institutionalised.

### **Recommendations**

In line with the study findings, the following recommendations are given:

- I. All the selected factors should be taken into consideration while motivating academic staff to engage in continuous usage of digital pedagogy in their teaching-learning activities.

- II. Those perceived factors that have a weak influence or relationship with continuous usage of digital pedagogy (e.g., perceived affordability) should be further strengthened. Institutional authorities should therefore devise means of ensuring availability of digital technologies for staff to acquire at affordable rates.



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