Innoeduca. International Journal of Technology and Educational Innovation
Vol. 9. No. 1. Junio 2023 - pp. 126-142 - ISSN: 2444-2925 DOI: https://doi.org/10.24310/innoeduca.2023.v9i1.15286

Relationship between Technological Change, Digitization, and Students' Attitudes toward Distance Learning in Lagos Higher Education Institutes

Relación entre el cambio tecnológico, la digitalización y las actitudes de los estudiantes hacia la educación a distancia en institutos de Educación Superior de Lagos

RECIBIDO 23/08/2022 ACEPTADO 10/11/2022 PUBLICADO 01/06/2023

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ABSTRACT

The focus of this research is to investigate the relationship between learning flexibility, support services, and students' attitudes toward remote learning programs in Nigeria. A correlational research methodology is used, and 385 individuals drawn from a multi-stage sampling technique form the study's sample. The data collecting tool is a three-section questionnaire devised by the researchers. Experts validated the questionnaire, which was then administered once on a randomly selected sample to assess the internal consistency. The Cronbach Alpha formula produced values of .74, .77, and .78 for the three separate questionnaire constructs. At the .05 level of significance, two research questions were posed, and two related null hypotheses were investigated. The collected data is analysed using the Mean, Standard Deviation, and Pearson Product Moment Correlation formulas. The findings show that there is a positive relationship between digital learning flexibility and students' attitudes toward distant learning programs (r =.439, Freq=476, p.05). There is also a favourable link between technology supports and students' attitudes toward distant learning programs (r =.339, Freq=476, p.05). It is thus recommended, among other things, that providers of distance learning programs guarantee high flexibility and quality learner support services to cater to the academic needs of learners with different characteristics, as this would improve students' positive attitudes and increase the enrolment of candidates in distance learning programs.

KEYWORDS Change; Higher Education; Organizational Culture; Technology; Digital; Distance Learning; Student Attitudes.

RESUMEN

El enfoque de este estudio es investigar la relación entre la flexibilidad de aprendizaje, los servicios de apoyo y las actitudes de los estudiantes hacia los programas de aprendizaje remoto en Nigeria. Se utiliza una metodología de investigación correlacional y se extraen 385 individuos con una técnica de muestreo de etapas múltiples para formar la muestra del estudio. La herramienta de recolección de datos es un cuestionario de tres secciones diseñado por los investigadores. Los

expertos validaron el cuestionario, que luego se administró una vez en una muestra seleccionada al azar para evaluar la consistencia interna. El alfa de Cronbach produjo valores de .74, .77 y .78 para las tres construcciones de cuestionario separadas. En el nivel de significación de .05, se plantean dos preguntas de investigación y se investigan dos hipótesis nulas relacionadas. Los datos recopilados se analizan utilizando las fórmulas de correlación de producto-momento de Pearson, desviación estándar y media. Los hallazgos muestran que existe una relación positiva entre la flexibilidad del aprendizaje digital y las actitudes de los estudiantes hacia los programas de aprendizaje a distancia (r =.439, Freq=476, p.05). También existe un vínculo favorable entre los apoyos tecnológicos y las actitudes de los estudiantes hacia los programas de aprendizaje a distancia (r =.339, Freq=476, p.05). Por lo tanto, se recomienda, entre otras cosas, que los proveedores de programas de educación a distancia garanticen servicios de apoyo al estudiante de alta flexibilidad y calidad para atender las necesidades académicas de los estudiantes con diferentes características, ya que esto mejoraría la actitud positiva de los estudiantes y aumentaría la inscripción de candidatos para programas de aprendizaje a distancia.

PALABRAS CLAVE Cambio; Educación Superior; Cultura Organizacional; Tecnología; Digital; Educación a Distancia; Actitudes de los estudiantes.

1. INTRODUCTION

Lagos is a cosmopolitan state with a population of approximately 17 million people (Wright et al., 2013). With practically all of Nigeria's telecommunication companies headquartered in Lagos, the state is the country's commercial nerve centre. The state has four universities and additional higher education schools, which are insufficient to meet the growing population's educational needs (Vermeulen et al., 2017)transformative leadership (TL. The use of digital technology in education has become a major topic (Okposio, 2021). There are several advantages to using digital technology in higher education institutions, including improved learning quality. It teaches students how to use technology and encourages them to be more involved. It also increases the performance and motivation of instructors and pupils. In the sphere of e-learning, many networks have emerged as the fourth generation (Samsudeen, & Mohamed, 2019).

A learning management system (LMS) is a web-based technology that aids in the development, distribution, and evaluation of a particular learning process. LMS is also known as a virtual learning environment or a course management system, and it provides more flexible options and benefits for both learners and teachers. This system includes software tools and capabilities that make it simple to access and manage learning content. LMS is made up of seven separate tools that combine diverse features to provide a wholly online approach with little or no need for face-to-face sessions. The Blackboard learning management system was used by higher education institutions in Lagos (Edebatu et al., 2019).

This tool is essentially a web-based server application with features such as course administration, customized open architecture, and scalable design. This research focused on the role of technological development and digitization in mediating the link between organizational culture and student attitudes in higher education institutions. A knowledge vacuum exists because the connection between organizational culture and student attitudes toward technological development

and digitization has not been addressed. Higher education institutions in Lagos have used digital technologies in the educational system to help the universities achieve the Millennium Development Goals and the Sustainable Development Goals. Students in Lagos encounter several hurdles in gaining access to good instruction via digital technologies. Due to a lack of knowledge and abilities, access to and usage of digital technology devices has been challenging (Çetin et al., 2021).

2. LITERATURE REVIEW

Universities in Africa have recently begun to integrate technology into their operations. University libraries, which hold the intellectual materials of the institutions, are completely involved in this evolution (Vermeulen et al., 2017). Digitization in Africa refers to the "conversion of non-digital material to digital form" (Okeke et al., 2015, p. 37). Digitization refers to the endeavour to digitize the institution's intellectual property. It is related to the e-services that most libraries are attempting to adopt in the digital world (Bourne & Bourne, 2017). Nigeria is the most populous black country, with an estimated 200 million inhabitants. As of 2020, Nigeria has 170 universities, 43 of which are owned by the federal government, 48 by state governments, and 79 by private persons or organizations. According to Okoroma (2018), the funding of six university librarian heads to attend a workshop by UNESCO spurred the institutions' early interest in digitalization. The digitization of resources is projected to boost a university's image in the long run. It also contributes to the webometric ranking of universities among the best in the world (Andreoni, & Anzolin, 2019).

The primary motivations for digitization are to increase access and preservation. It entails compiling a database of items such as theses and dissertations, as well as other resources worth preserving (Purwanti et al., 2021). Several initiatives have been undertaken to advance the digitization problem in Nigeria. Because digitization is still novel in Nigeria (Muhammad, & Johar, 2019), most digitization efforts in Africa have historically originated from outside Nigeria. However, in today's knowledge-driven economy, where nations are evaluated based on their information power, Nigeria cannot afford to neglect the digitization of its resources. What Nigeria may consider seriously is the establishment of a digitization project in Nigeria by Nigerians to protect its resources. The digitization effort is capital demanding, necessitating sophisticated software and hardware technologies, highly qualified employees, and other infrastructure such as appropriate power supply, which many African nations lack (Ojogiwa, & Qwabe, 2021). According to Asongu and Tchamyou (2020), a fundamental difficulty for African digitization initiatives is the availability of competent labour. Moreover, Samsudeen and Mohamed (2019) state that the challenges impeding digitization in Africa are a lack of competence, legal copyright laws, insufficient financing, and organizational infrastructure. Even though Ghavifekr and Rosdy (2015) as well as Jayanthi et al. (2007) have advocated for institutional repositories to manage digitization issues, this development is disappointing.

The Internet has profoundly transformed the technological and economic environments in such a way that quantum jumps in the use of technology for learning are now achievable (Mallya et

al., 2019). According to one study, students of any academic background, ethnicity, computer proficiency, gender, or academic aptitude might learn using the Internet in the same way they would through traditional contact (Mohammed et al., 2020). Some experts (Samsudeen, & Mohamed, 2019) argue that not all present students are digital natives because the majority of their activities include the usage of the Internet.

Many scholars such as Hassan et al. (2019), Li and Yu (2020), and Mutahar et al. (2017) have explored the aspects that impact students' academic use of the Internet from various theoretical perspectives. The Technology Acceptance Model (TAM) developed by Davis (1986), the Innovation Diffusion Theory developed by Rogers (1962), the Theory of Reasoned Action developed by Fishbein and Ajzen (1975), and the Social Influence Theory developed by (Kelman, 1958; 1961) are the most prominent theories used to understand users' acceptance of information systems (IS). To understand students' attitudes and behavioural intentions toward accepting Internet usage for academic activities in higher education institutions in Lagos, Nigeria, we need to re-examine Davis' previously developed model (1986) using the following factors: Ease of Use, Perceived Usefulness, Behavioural Intention, and Attitude and Facilitating Condition. Re-examining the paradigm will bring to the forefront important questions about the adoption of innovation for education among students.

In theory, this study has focused on what impacts students' views and behavioural intentions regarding using the Internet for learning. Surprisingly, the enabling condition had no statistically significant impact on students' attitudes on using the internet for education. According to the findings, the usefulness of the Internet was a strong predictor of students' attitudes and behavioural intention to learn.

2.1. Relevant Theories

The study adopted Unified Theory of Acceptance and Use of Technology (UTAUT) to explain the concepts of attitudinal expectancy, relationship expectancy, facilitating conditions, social influence, and behavioural intention toward adopting technological change and digitization (Samsudeen, & Mohamed, 2019). The Motivation Model – ARCS – is employed as a theoretical foundation for the motivation in this study. An attitude consists of three components: the affective component related to emotions, the behavioural component concerning an individual's response, and the cognitive component involving evaluation (Jain, 2014). The focus of a student's attitude is on their desire to react in a certain way to something. Naturally, a student's reaction might range from positive to negative, or from good to bad (Samsudeen, & Mohamed, 2019). Luhamya et al. (2017) aimed to explore organizational culture as it influences public higher education institutions, looking at it through the lens of transformational leadership. This will be beneficial since it fits with the dynamism of technological progress and digitization.

Understanding students' technology and gadget usage has been an important interest of scholars in education. Numerous theoretical models have been developed to investigate this, but their use has mainly declined since the 2003 launch of UTAUT, which investigates Performance

Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions to assess technology acceptance (behavioural intention) and utilization. Age, gender, experience, and voluntariness of usage all modify these notions (Nicholas-Omoregbe et al., 2017).

The Attention, Relevance, Confidence, and Satisfaction (ARCS) model has been developed to investigate and comprehend how to acquire and sustain learner attention during the learning process. The ARCS model is based on Tolman and Lewin's Expectancy-Value Theory, which also advocates that attention, relevance, confidence, and satisfaction be taken into account to keep learners engaged. The ARCS model provides a structure and tactics for retaining staff and students in business and education. The third variable, organizational culture, is based on the two theories of UTAUT and ARCS, as both include elements of individuality and collectivism.

2.2. Conceptual Framework

This study is founded on three theories: The Unified Theory of Acceptance and Usage of Technology (UTAUT); Attention, Relevance, Confidence, and Satisfaction (ARCS) theory of motivation; and item response theory of attitude and transformational leadership-organizational culture. These three theories will be combined to investigate and comprehend digital technology users' behavioural intents and digital technology utilization at higher education institutions in Lagos.

FIGURE. 1: Research Conceptual Framework

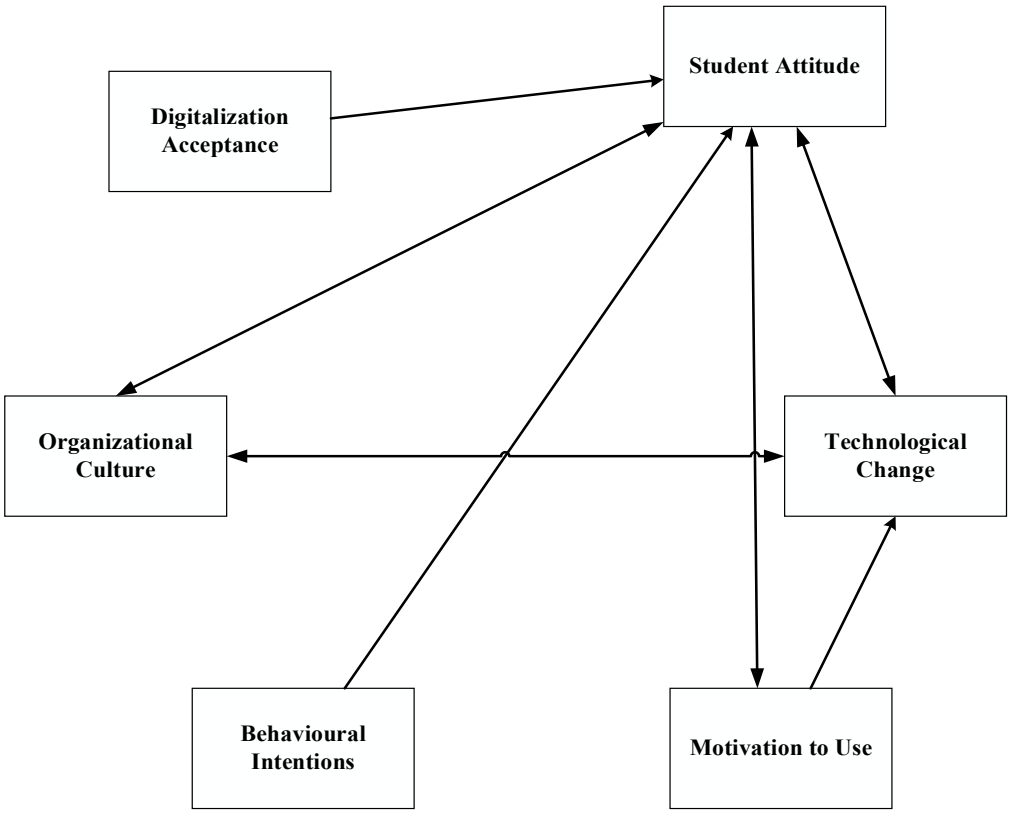
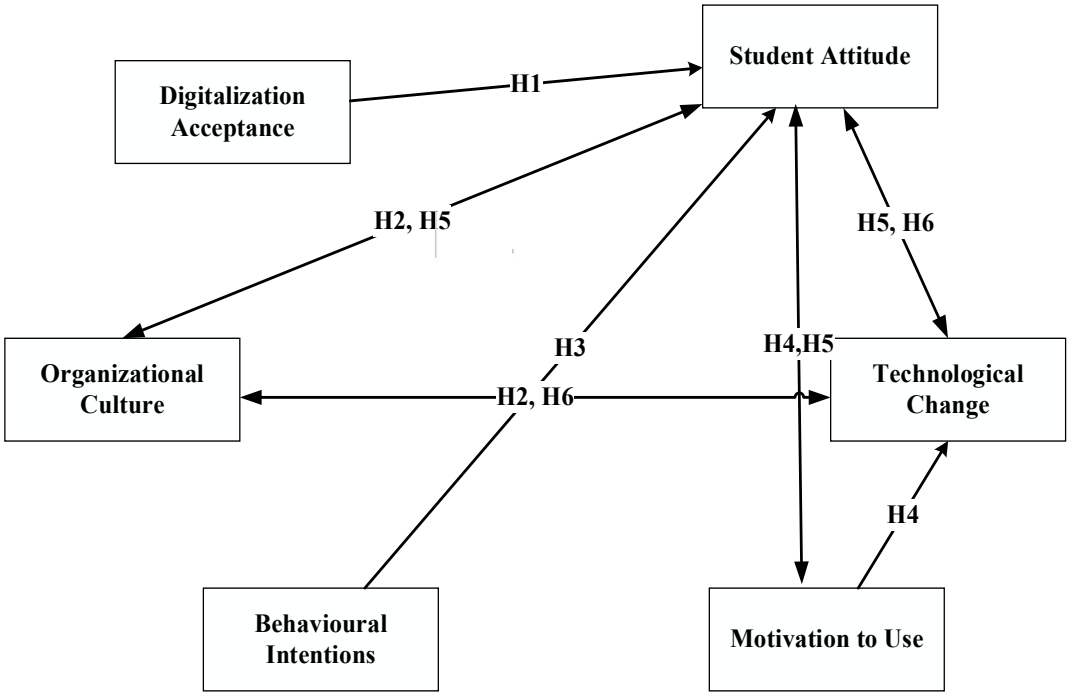


FIGURE. 2: **Research Conceptual Framework Showing the Hypothesis and the Research Variables**



The conceptual framework depicted in Figures 1 and 2 above demonstrates how attitude expectancy, effort expectancy (Digitization Acceptance), social influence (Organization Culture), facilitating conditions (Attitude to Change), and motivation to use digital technology influence higher education institution students' behavioural intentions and use of digital technology. However, according to the conceptual framework of this study, the respondents are students from higher education institutions in Lagos, ranging in age from 16 to 40 years old.

It is envisaged that the conceptual framework would aid in determining how the specified UTAUT variables and ARCS impact students' attitudinal intentions to utilize digital technology in higher education institutions. The study population's specific culture and setting add to the research body's distinctiveness. It is advantageous since, in general, there is still a lack of empirical study in which Behavioural Intention is examined as a mediator in the utilization of digital technology systems (Hussain et al., 2021; Parra et al., 2021; Samsudeen, & Mohamed, 2019).

3. RESEARCH METHODOLOGY

The study investigates the impact of technological development, namely digitization, on the link between organizational culture and students' attitudes regarding this change. This section discusses the research strategy, demographic, and sample methods, as well as the instruments used. It also discusses how data is prepared for structural equation modelling (SEM-AMOS) analysis.

3.1. Research Design

Correlational research examines the linkages between technological progress, digitization, corporate culture, and student attitudes in Lagos, Nigeria. Samples are obtained from the institutions that have agreed to participate. The approach is ideal for predicting and assessing the mediator effects of Path Analysis. Surveys are a superior form of primary data gathering in social and behavioural research in comparison with observation. As a result, a correlational research design is most suited to the current investigation. The correlational relationship between variables dictates the correlational design approach used to gather data via a structured questionnaire.

3.2. Location of the Study and Population Sampling

This research took place in higher education institutions in Lagos, Nigeria. It is Nigeria's most populous metropolis, with a population of around 17 million people. A critical part of survey research is selecting a representative sample. The features of the sample should represent the entire population, not just a subset of it. Because of its unique role as a country's representation, this research concentrated on higher education institutions in Lagos, Nigeria. Students from the University of Lagos, Lagos State University, Lagos State Polytechnique, Adeniran Ogunsanya College of Education, Federal College of Education Technical, Yaba College of Technology, Anchor University, Caleb University, and other institutions are the study's target audiences. Table 1 illustrates the proportions of sampling and the number of students in each stratum.

TABLE 1: Summary of the Proportional Sample Size

Institutions	Population	Percent	Sample size
University of Lagos	87	32.3	54
Lagos State University	94	34.9	58
Yaba college of technology	30	11.2	19
Lagos state polytechnic	29	10.8	18
Anchor University	29	10.8	18
TOTAL	**269**	**100**	**167**

Following the application of proportional stratified random sampling, the proportionate stratified sampling approach was utilized to choose respondents from pre-formed groupings or clusters. It should be noted that all groups had an equal opportunity to participate in this study. Finally, participants were picked at random from each of Lagos' higher education institutions; the researcher physically visited each school and delivered the questions after gaining consent from all participants.

3.3. Instrumentation

In this study, data was be collected using a questionnaire. The researcher perceived this tool as the appropriate tool for data collection because it can be distributed to a large number of respondents at the same and is relatively cheap and quick, which also allows the generalization of results to the larger population, according to Aldhafeeri and Khan (2016).

The questionnaire comprises five sections: A, B, C, D, and E. Section A consists of the respondents' demographic information such as age, specialization, region, the frequency of using the latest technology, and devices primarily used to access new technology. Section B comprised factors

influencing the utilization of digital technology; these factors consist of five sub-sections, namely (i) Technological Change (TC), (ii) Digitization Acceptance (DA), (iii) Organizational Culture (OC), (iv) Attitude to Change (AC), and (v) Mediating Variable in the use of new technology (MVNT) based on ARCS model. Section C is related to attitudes toward the usage of digital technological change as a mediator (DTC), while Section D is about the utilization of new technology. The latter consists of two sub-sections: Section 1 about level of further technology use (Volume) and Section 2 about level of new technology utilization (Frequency). Section (E) concerns the effect of organisational culture on students' attitudes. The composition of the questionnaire is presented in Table 2.

TABLE 2: Composition of the Questionnaire

Section	Aspect	Sources	No. Items
A	Demographic information		5
B	Factors influencing students' utilization of new technology	Venkatesh et al. (2003) Kim, & Keller (2010)	60
C	Attitude toward the use of digital technological change	Venkatesh et al. (2003)	5
D	The utilization of new technology	Asiri et al. (2012)	19
E	Effect of organisational culture on students' attitude	Alas, & Vadi (2006)	5
TOTAL			94

3.3.1. Demographic information

The first section (A) aims to collect background information about students in Higher education institutions in Lagos. This section consists of five items: age, specialization, name of institutions, new technology usage frequency, and devices used to access the latest technology.

3.3.2. Factors influencing students' utilization of digital technology

The second section (B) investigates the factors influencing digital technology utilization based on UTAUT theory and the ARCS model. This section consists of five Subsections, namely (1) Technology Change (TC), (2) Digitization Acceptance (DA), (3) Organizational Culture (OC), (4) Attitude to Change (AC), and (5) Mediating Variable in the use of new technology (MVNT). The total number of items in section B was 60 items adapted from instruments by Venkatesh et al. (2003) and Kim and Keller (2010).

TABLE 3: Components of Section B (Factors influencing students' utilization of digital technology)

Section	Factor	Sources	No. Items
1	Technology Change (TC)	Venkatesh et al. (2003)	5
2	Digitization Acceptance (DA)	Venkatesh et al. (2003)	6
3	Organizational Culture (OC)	Venkatesh et al. (2003)	8
4	Attitude to Change (AC)	Venkatesh et al. (2003)	5
5	Mediating Variable in the use of new technology (MVNT)	Kim & Keller (2010)	36
TOTAL			60

3.3.3. Attitude toward the use of digital technological change mediator

The purpose of the third section (C) of this questionnaire is to investigate participants' perception of behavioural intention in using digital technological change and see whether behaviour intention is a mediator between factors influencing digital technology use and the utilization of new technology. This section consists of five items adapted from Venkatesh et al. (2003).

3.3.4. The Utilization of New Technology

The purpose of the fourth section (D) of this questionnaire is conceived to be the frequency and volume of digital technology usage by students at the various higher education institutions in Lagos. This section consists of 19 items distributed into two subsections: Section 1 on Level of digital technology usage (Volume) and Section 2 on Level of digital technology utilization (Frequency). The description is shown in Table 4.

TABLE 4: Components of Section D (Utilization digital technology)

Section		Sources	No. Items
1	Level of digital technology usage (Volume)	Asiri et al. (2012)	5
2	Level of digital technology utilization (Frequency)	Asiri et al. (2012)	14
TOTAL			19

3.3.5. The Effects of Organisational Culture on Students' Attitude

The purpose of the last section (E) is to investigate the participants' perceptions of organizational culture's role and its direct and significant effect on students' attitudes toward technological change and digitization.

3.4. Validity and Reliability

Validity and reliability are two factors that must be properly verified in a study's employed instrument. The validity of an instrument relates to how well it measures the material that it was supposed to assess. When the content of an instrument matches the material covered in the subject area, it is considered legitimate. The capacity of an instrument to make consistent measurements from one set to another is referred to as its dependability. Instrument dependability is the capacity of an instrument to be consistently interpreted across a variety of scenarios in which a set of indications of the hidden construct is internal consistency. In a structural equation model, reliability is defined as the degree of measurement error in the variables that may be used to determine the correlation between the items and the construct. A widely accepted rule of thumb for describing internal consistency using Cronbach's alpha is depicted in Table 5.

TABLE 5: Recommended Alpha Range

Alpha range	Internal Consistency
Below 0.6	Unacceptable
Between 0.6 and 0.65	Undesirable
Between 0.65 and 0.7	Minimally Acceptable
Between 0.7 and 0.8	Respectable
Between 0.8 and 0.9	Very Good
Above 0.9	Excellent

Source: Cortina (1993)

Cronbach's Alpha is a reliability coefficient that was utilized in this study to assess the dependability of the obtained data. The internal consistency with unsatisfactory, undesirable, minimally acceptable, respectable, very good, and outstanding division has been carried out from below 0.6 to above 0.9 according to the alpha range. We examined dependability from two perspectives: accuracy (the degree of correctness) and unreliability (the degree of inaccuracy).

3.5. Data Collection

Data collection is an essential component of every research project since it allows the researcher to obtain first-hand knowledge for decision-making. The researchers collected data from each institution sampled using an observation checklist and a Semi-Structured Interview guide. Simultaneously, the respondents were given access to the semi-structured interview guide's questions, and their replies were recorded.

3.6. Data Analysis

The data in this study were analysed using descriptive and inferential statistics. The descriptive analysis was carried out with the help of the Statistical Package for Social Sciences (SPSS) version 22. In addition, for the inferential analysis, Analysis of Moment Structures (AMOS) version 22 was used.

3.7. Descriptive Statistics

In this study, descriptive statistical analysis was used to calculate percentages, frequencies, means, and standard deviations. To characterize the demographic data and research questions, descriptive analysis was used. The Analysis of Moment Structures (AMOS) version 22 was used to do Structural Equation Modeling (SEM).

3.8. Structural Equation Modelling

SEM is a statistical approach that combines factor and path analysis to study a sequence of correlations between variables. SEM has various characteristics that set it apart from other statistical analysis approaches, such as the ability to estimate a sequence of direct and indirect impacts

at the same time. Confirmatory Factor Analysis (CFA), Measurement Model (MM), and Structural Model (SM) were used to evaluate SEM. SEM was evaluated in this study using CFA.

3.9. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is the initial phase in the SEM study and takes into account data preparation before the actual SEM analysis. The CFA was designed to specify distinct constructs and was used for three main purposes:

i. model fit testing,
ii. convergent validity testing, and
iii. construct reliability testing.

The model fit test may be used to assess how well the model matches the sample data.

3.9.1. Model fit indices

The fit indices that can be used to measure the model fit include three types.

i. Absolute fit indices directly evaluate how well the stated model reproduces the observed data and offer the requisite fitness theory assessment. It is accomplished by referring to various generally used index values in SEM, such as Root Mean Square Error Approximation (RMSEA), which shows a perfect match when the value of RMSEA is less than 0.08. The goodness of fit index (GFI) and the Chi-Square (Chi-sq) are both very sensitive to sample size and the number of variables in the model. As a result, its value alone does not adequately characterize the model's fit.
ii. Incremental fit indices quantify the degree of improvement when comparing the estimated model to the null model, assuming that all observed variables are uncorrelated. The Comparative Fit Index (CFI), which analyses the shift from the target model to the independent model and must be larger than 0.9, is widely employed. The Normed Fit Index (NFI), Incremental Fit Index (IFI), which may uncover inconsistency and must be more than 0.9, and Tucker-Lewis Index (TLI), are all useful.
iii. Parsimonious fit measures present Parsimony fit indices to estimate the best model among a set of computing models such as Relative Chi-sq (Chi-sq/df).

To increase model fit in this study, elements with factor loading less than 0.60 must be removed (Hooper et al., 2008; Awang, 2014).

i. Acceptance of technological change CFA. The initial model indicated poor match with one component, Actual Use (Volume). The component with factor loadings less than 0.60 was eliminated to enhance model fit. Then, the test was conducted again. The model fit showed a good fit (CFI ≥ 0.9, IFI ≥0.9, and RMSEA ≤ 0.08) with the retained items.

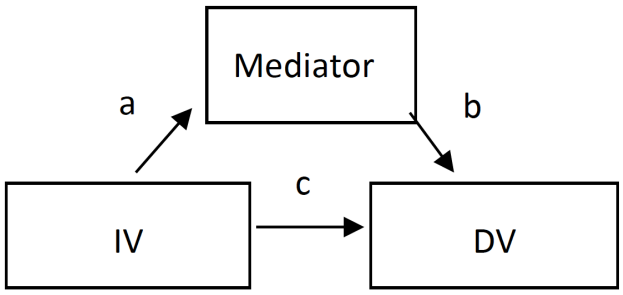
ii. Digital technology CFA. The original model, Actual Use (Frequency), with fourteen components, suggested a poor match. The two components with factor loadings of less than 0.60 were deleted to improve model fit. The test was carried out once again, and the model fit showed a good fit with the remaining items where all the indices followed the criteria (CFI ≥ 0.9, IFI ≥0.9, and RMSEA ≤ 0.08).

3.10. Mediator Variable

When one variable interposes between two variables that are connected to it, the mediating effect occurs. A substantial correlation between the mediator variable and the other factors is required.

In this study, technological transformation and digitization are viewed as model mediator factors. In route analysis, mediator roles were defined as an indirect prediction or a mediating impact, and all these paths estimate direct and indirect effects between the variables in the model. The description of mediating effects is shown in Figure 3.

FIGURE 3: Indirect and Direct Effects of Mediator



In this study, only a direct effect (c) between all independent variables and the factors affecting the utilization of new technology were estimated in an initial model. A second model was then calculated by adding the mediator variable to draw the additional paths (a & b) between IV's and DV in the mediating effect by behavioural intention.

This plays an important part in ensuring consistent internal measurement. In the current investigation, several factors were assessed to arrive at the same results as statistical analysis. For example, the third hypothesis testing sought to identify behavioural intents as a moderator of its connection with other key factors in technological development among students in higher education institutions. As a consequence of the regression findings, it was discovered that behavioural intention has a considerable influence on higher education institutions' use of digital technology. Moreover, it was consequently found to be one of the most prominent factors affecting technology change used as the value is estimated at 0.24. Therefore, the behavioural intention positively influences the utilization of digital technologies and the students' technicalities and the higher level of preferences such as using smartphones, laptops, and other communicative devices to facilitate the learning process.

4. RESULTS

Research question one: What is the relationship between both learning flexibility and students' attitudes regarding the online distance learning (ODL) program in Nigeria?

TABLE 6: Respondents' Mean and Standard Deviation on Learning Flexibility and Students' Attitudes Toward Open and Distance Learning

Variable	Freq.	Mean (X)	Standard Deviation (SD)	Regression	Significance
Digital Learning Flexibility	476	54.31	4.76	.439**	0000
Student's Attitude	476	52.37	5.65		

Table 6 displays the mean and standard deviation of respondents' responses to questions about learning flexibility and students' attitudes toward open and remote learning. For the two builds, the table shows X = 54.31, SD = 4.76 and X = 52.37, SD = 5.65. A similar null hypothesis was investigated using Pearson Product Moment Correlation analysis to assess whether the mean scores had any meaningful link. According to the hypothesis, there is no significant association between learning flexibility and students' attitudes regarding the ODL program in Lagos State, Nigeria. The table demonstrated a statistically significant positive relationship between learning flexibility and students' attitudes regarding open and distance learning (r =.439, Freq=476, p.05).

Research question two: What is the link between students' access to support services and their perceptions of the ODL program in Nigeria?

TABLE 7: Respondents' Mean and Standard Deviation on Student Support Services, as well as their Attitude Toward Open and Distance Learning

Variable	Freq.	Mean (X)	Standard Deviation (SD)	Regression	Significance
Technology Supports	476	51.83	4.62	.339**	0000
Student's Attitude	476	52.37	4.86		

Table 7 displays the mean and standard deviation of respondents' attitudes regarding student support services and open and remote learning. For the two builds, the table shows X = 51.83, SD = 4.62 and X = 52.37, SD = 4.86. A similar null hypothesis was investigated using Pearson Product Moment Correlation analysis to assess whether the mean scores had any meaningful link. According to the hypothesis, there is no statistically significant association between technology support and students' attitudes regarding the ODL program in Lagos State, Nigeria. The table demonstrated a statistically significant positive relationship between students' use of ongoing support and their attitudes regarding the ODL program (r =.339, Freq=476, p.05). The hypothesis was not validated, meaning that students' views on enrolling in the program would improve as long as student support services are present and functioning in ODL.

5. DISCUSSION OF FINDINGS

The findings of research question one, as well as the null hypothesis that is connected to it, demonstrated that there is a substantial positive relationship between learning flexibility and students' views about ODL programs in Lagos State. According to the findings, when stakeholders focus more on making the program more adaptable for learners, students' opinions toward enrolling in ODL programs increase. This may be because learning flexibility allows students to participate in online education at their own pace and in their location. This learning approach effectively helps a student with greater independence to engage in autonomous learning according to their background, talents, and interests. As learning progresses in this manner, students may develop a more positive attitude about ODL. The findings are consistent with the findings of Alhih et al. (2017), who discovered flexibility in student-content interaction in synchronous mediums such as material shared, multiple media tools utilized, and postings during the course. The conclusion is further reinforced by Cassidy et al. (2016), who discovered that learning flexibility allows educators to safely expose children to varied actors, activities, and situations using an established curriculum. The findings of research question two, as well as the null hypothesis that accompanied it, suggested that there is a substantial positive relationship between student support services and students' views about ODL programs in Lagos State.

This finding might be explained by the fact that if the ODL program focuses more on developing student support services, the institution's overall image will likely improve, and students' willingness to enrol in the program will also improve. Increased student support services potentially result in current ODL students being retained and a greater completion rate. Mayanja et al. (2019) found that by introducing learning management systems, web-based apps, registration, and results viewing, Lagos State University has improved student learning and assistance, ensuring students' happiness and retention in the ODL system. Afify (2018) discovered statistically significant differences in the mean scores of the experimental groups, which were supported by timely feedback in developing blogging design and production abilities and satisfaction with the distance e-learning environment. However, Ain et al. (2016) discovered that the majority of the students were unsatisfied with the support system provided to them at institutions of higher learning, resulting in a negative attitude about ODL.

6. CONCLUSION

Based on the findings reported, we can infer that there is a direct relationship between the flexibility of learning in the ODL program and students' views on enrolling in the program at Lagos State, Nigeria. Students' opinions about the ODL program are likely to be positive as long as the program stays adaptive through student-content interaction in synchronous and asynchronous mediums, the use of multiple media tools, and rapid response through postings during the course. It was also demonstrated in Lagos State, Nigeria, that there is a linear relationship between student

support services and their attitude toward ODL. This conclusion is based on the fact that support services like help and prompt feedback make the ODL program more enjoyable for learners, resulting in a positive attitude toward the program.

7. RECOMMENDATIONS

The study recommendations based on the results are as follows:

1. To enhance students' attitudes toward accepting enrolment in ODL, program management, in collaboration with program coordinators, should endeavour to make the program more flexible to attract more students' enrolment.
2. To develop a positive attitude toward ODL, program organizers should expand learner support services to meet varied learner characteristics and to assist prospective students with their inquiries.
3. Further research into students' attitudes and perceptions of management in higher education institutions should be carried out.

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