Integrating Emerging Technologies In Business Education Curricula In Tertiary Institutions In Anambra State

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Abstract
This study was carried out on integrating emerging technologies in business education curricula in tertiary institutions in Anambra State Nigeria. The main objective of the study was to examine the effect of integrating emerging technologies in business education curricula. Specifically, the study analyzed the effect of Artificial Intelligence (AI) and block chain technology on business education curricula in tertiary institutions in Anambra State. The study adopted a surey research design. Two research questions and two hypotheses guided the study. The population of the study was 4750 which comprises of all the final year business education students in the tertiary institutions in Anambra state. Simple random sampling technique was used by the researcher to select the number of respondents for the study, so, the sample size for the study was 750 students. He instruments used for data collection was structured questionnaire developed by the researcher. The instrument was validated and reliability coefficient of 0.64 obtained. The findings of the study showed that Artificial intelligence has significance effect on business education curricula in tertiary institutions and similarly Block chain technology has significance effect on business education curricula in tertiary institutions in Anambra State. The study recommends that Institutions of higher learning should integrate the emerging technologies into the business education curricula as it enhances learning so as to upgrade the skills and competences of their students and furthermore, the three arms of the government (Federal, State and Local) should consider funding of business education programme in tertiary institutions a top priority considering the role it plays in National development.

Keywords: *business education, block chain technology, artificial intelligence, tertiary institutions*

Introduction

Business education is a component of vocational technical education programme that prepares an individual for career in business and also to be an intelligent consumer of economic goods and services. Business education provides students with the needed competencies, skills, knowledge, understanding and attitudes to perform as workers in industries, civil service and also as proprietors of business. Business education is work-focused, skill-based, result- oriented and technology-based (Ugwoke, 2011).Change is the only constant factor in life. This characterizes the dynamism in the competitive business environment. Education is seen as a document per excellence in preparing citizens for effective roles in the society. One form of education that equips its recipients to adapt to the changing world of work is business education.

According to the American Vocational Association (AVA) in Osuala (2009), business education is a programme of instruction which consists of two parts: (a) Office Education; a vocational education programme for office careers through initial, refresher and upgrading education leading to employability and advancement in office occupation, and (b) General Business Education; a programme to provide students with information and competencies which are needed by all in

managing personal and business affairs and in using the services of the business world. For Business Education programmes to remain relevant in providing the needs of individuals and that of the society; they must embrace current trends (new technologies) in the academic and economic demands of the society.

Emerging Technologies play a vast role in the educational process. The application of emerging technologies in education is changing learners' experiences both inside and beyond the classrooms. Diane and Steven (2007) stated that there is an evolving relationship between education and technology, and the evolving pedagogies have also taken advantage of newly designed or emerging technologies. According to former U.S. Secretary of Education, John King, "one of the most important aspects of technology in education is its ability to level the field of opportunity for students".

The integration of emerging technologies in teaching and learning process is no longer a choice but a need for educators considering the level of infusion of technology on education particularly as it relates to the changing learning environment, demand for flexibility in methodology, and the need to enhance creativity and innovations in learning. The application of emerging technologies has become so irresistible in the teaching and process, and it is changing the way teaching is structured and organized, and the job performance of educators. The adoption and usage of emerging technologies assist educators and students to interact more outside the classroom, and to set up classes at any time and place. (Khajeh 2011).

Dynamism of the world which is necessitated by emerging technologies demands human beings to be in a constant motion of technology and learning. Business education teachers are expected to integrate information and communication technology in the teaching and learning process. They ought to use technology so that it supports instruction and enables the learners to use technology as an important tool to meet their information and learning needs. However, there are many challenges that are associated with these use of these new technologies in business education which are, lack of professional skills to cope with contemporary educational goals, lack of opportunities to improve professional knowledge and performance, and poor alignment between programs and the realities of schools to mention a few. It is against this background that the study examines integrating emerging technologies in business education curricula in tertiary institutions in Anambra State, Nigeria.

Objectives of the Study

The broad objective of the study is to examine integrating emerging technologies in business education curricula in tertiary institutions in Anambra State, Nigeria. The following are the specific objectives:

1. Analyze the effect of artificial intelligence on business education curricula in tertiary institutions in Anambra State.
2. Determine the effect of block chain technology on business education curricula in tertiary institutions in Anambra State

Research Questions

The following research questions guided the study

1. What are the effect of artificial intelligence on business education curricula in tertiary institutions in Anambra State.
2. what are the effects of block chain technology on business education curricula in tertiary institutions in Anambra State

Hypotheses

Ho_1: Artificial intelligence has no significant effect on business education curricula in tertiary institutions in Anambra State.

Ho_2: Block chain technologyy has no significant effect on business education curricula in tertiary institutions in Anambra State.

Review of Related Literature

Concept of Technology

Technology could be defined as the application of the scientific method to solving problems in our daily life, (Nwoji, 2012). But in the perspective of business education, technology can be seen as the application of scientific method to solving problems regarding impartation of skills to learners to meet the changing needs and demands of the society. Technologies which revolve round the use of internet and resources have emerged that are aimed at improving productivity. Typical examples of internet teaching and learning media that facilitate teaching and learning in business education include: Projectors, E-mail, Smart boards, Mimeo boards, Teleconferencing, Video Conferencing, E-book Reader and Streaming Videos, (E-How, 2012). Technologies in business education are designed to prepare students for a variety of careers in high-tech business offices.

Artificial intelligence

Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems, and therefore it is a set of computational techniques inspired by the way humans use their nervous system and their body to feel, learn and act. (Harkut & Kasat, 2019). AI applications are important in the fields of human endeavours. But of recent it is more important in the field of educational institutions and universities. The mandate of tertiary institutions transcends the traditional function of preserving heritage, identity and education.

It is rather required to keep pace with emerging technological development through the creation of new methods of education and teaching. According to Chaudhary, (2017), artificial intelligence is beneficial for both students and teachers because it is used to create an educational environment and provide collaborative learning. The use of AI and modern technologies can help teachers and students gain more educational experience and provide information for teachers in the management of educational practices (Fernández, Fernández, & Aburto, 2019).

Block Chain

Block chain (BC) more formally known as distributed ledger technologies, is predicted to offer significant opportunities to disrupt traditional products and services such as the permanence of the BC record, and the ability to run smart contracts. These features significantly distinguish BC technology-based products or services from previous internet-based commercial developments and are also particular interest to the education sector.

Block chain technology is forecast to disrupt any field of activity that is founded on time- stamped ledgers. Within education, activities that could be impacted by BC technology include certification, management of student records, intellectual property management, issuing of payments and student information system architecture. Grech and Camilleri, (2017) stated that BC allows self-sovereignty whereby users can maintain direct control over the storage and management of their personal data; trust, as the technical infrastructure gives people enough confidence in its operations to carry through with transactions such as payments or the issuance of certificates.

Business Education

Business Education is part of vocational technical education programme that prepares an individual for career in business and also to be an intelligent consumer of economic goods and services. Business education provides students with needed competencies, skills, knowledge, understanding and attitudes to perform as workers inindustries, civil service and also as proprietors of businesses. Business education is work focused, skill based, result-oriented and technology-based (Ugwoke in Utoware and Amiaya, 2014).

American vocational Association (AVA) in Osuala (2009) explained that business education is a programme of instruction that consists of two parts: (a) office education; a vocational Education Programme for office careers through initial refresher and up grading education leading to employability and advancement in office occupation and (b) General Business Education; a programme to provide students with information and competencies which are needed by all in managing personal and business affairs and in using the services of the business world. If business Education must remain relevant, it has to attend and deal with the current technological needs of people and the society educationally economically and socially.

Theoretical Framework

Technology Acceptance Theory

This study is under propped by the Technology Acceptance Theory which was originally propounded by Fred Davis in 1989. The theory is alternatively termed Technology Acceptance Model (TAM). The theory was later developed by Davis, Bagozzi, and Warshaw (1989) to further explain how users' decision to adopt a technology is affected by several factors regarding when and how new technology can be used when presented (Aduaka & Awolusi, 2020). Technology acceptance theory assumes rational decision making on the part of adopters who intend to or currently adopt technology (Awoniyi, 2022). The chief proponent of the theory argued that the best way of increasing technology usage was by improving the acceptance of the technology (Obi-Nwosu, Onuoha & Okoye, 2021).

The theory emphasized that the two basic factors considered by rational users before adopting a technology are perceived ease of use (PEOU) and perceived usefulness (PU) (Nwankwo & Agbo, 2021). Perceived usefulness (PU) entails the extent to which the user believes that the use of a particular technology leads to improved job performance (Oniore & Okoli, 2019); while perceived ease-of-use (PEOU) connotes the extent to which the individual believes that the use of a particular technology does not require more personal effort (Amaduche, Adesanya & Adediji, 2020). In terms of perceived usefulness, scales that are deployed cover the speed of work done, accuracy of task completed, increased productivity, effectiveness and employee efficiency (Omotayo & Dahunsi, 2015). The scales of perceived ease of use include whether the technology is easy to learn, controllable, clear and understandable (Olaiya & Adeleke, 2019).

Empirical Review

Aruah, (2023) determined the extent of utilization of emerging technology in Business education for achieving sustainable development goals in Universities in Enugu State. The study was guided by two research questions and two null hypotheses. A descriptive survey research design was adopted for the study. The population used for the study comprised 26 business educators in two public universities offering business education programme in Enugu State. There was

no sampling due to the manageable size of the population. The instrument used for data collection was 21 item questionnaire grouped into one sections according to the research question that guided the study. The items were structured in four point rating scale. The instrument was validated and the reliability of the instrument was determined using Cronbach Alpha which yielded 0.71. Out of 26 copies distributed 24 copies were returned giving 92.31% return rate. Mean, standard deviation and t-test statistics were the statistical tools used. Based on the data analysis, the study identified that social media and virtual classroom is utilized to a low extent in teaching and learning of business education. Based on the findings of the study recommendations were made among which include; business educators should use social media tools in preparing lesson and emerging technology in education like virtual classroom should be used to improve the teaching and learning of business education.

Enang, (2022) ascertained emerging technologies in teaching and learning of business education in the new normal in tertiary institution in Nigeria. Specifically, the paper examined Ubiquitous Computing (UC); Collaboration Technologies (CT); Extended Reality (ER), Artificial Intelligence (AI) and BlockChain (BC). All the literatures reviewed proved that emerging technologies used in teaching and learning has more advantages compared to other means of learning, including flexibility, mobility, convenience, low cost, and user friendliness. The paper concluded that there is need to integrate emerging technologies in the curriculum of business education programmes. It was recommended among others that business educators and students need to develop new range of digital competence such as information processing, computational thinking and digital learning to cope with the emerging technologies in teaching and learning. Above all, there is need for professional development of business educators in the emerging technologies used in teaching in the new normal.

Igbongidi (2022) looked into how new technologies are affecting how business education courses are taught in Bayelsa state's tertiary institutions. The study's execution was directed by two research questions and one hypothesis. The study employed a descriptive survey research design. Two academic schools in Bayelsa state recruited a total of 37 business education instructors. Data were gathered using a questionnaire having a Cronbach reliability of 0.70. Percentages The research questions were analyzed using the mean score. According to the results of the data collection and analysis, instructors have access to new technology for teaching business education courses. It was determined that teaching business education courses are positively impacted by modern technology. It was suggested, among other things, that institutional managers should encourage business education instructors to learn new technology by sponsorship.

Ojo and Bashir (2020) assessed the impact of technologies on teaching and learning of business education courses in public tertiary institutions in Kwara State. Four Objectives, questions and one hypothesis guide the study. Descriptive survey research design was used for the study. A total of 40 business education lecturers in public tertiary institutions in Kwara state was selected. A questionnaire with Cronbach reliability of 0.70 was the instrument used for data collection. Percentages and mean score were used to analyze the data to answer the research questions while independent samples t-test were used to analyze the hypothesis. The result of the data collected and analyzed indicated that technologies have a

positive impact on the teaching of business education courses in public tertiary institutions. The result of the null hypothesis showed no significant difference in the mean rating of respondents. It was concluded that new technologies have a positive impact on the teaching of business education courses. It was recommended among others that institutional administrators should encourage business teachers through sponsorship to acquire knowledge and skills in the usage.

Edeh, (2020) examined the various challenges that obstruct the integration of emerging technologies in teaching and learning process in Nigeria. Data were collected through structured questionnaires, in addition to secondary data generated for review of literature. A total of two hundred (200) questionnaires were administered to respondents that consist of educators and students selected from both public and private secondary schools and tertiary institutions with similar level of infrastructures in Southwestern Nigeria. The collected data were later analyzed using descriptive statistics. The results show that majority of the respondents agrees that the integration of emerging technologies in teaching and learning process brings inspiration and modernization to education, enhance inclusiveness, and promotes the achievement of teaching and learning objectives. In addition, the findings proved that the integration of ETs in teaching learning process are often constrained by number of challenges which includes: epileptic power supply, insufficient skills, availability and accessibility issues, funding, inadequate professional development, and poor internet connectivity.

Method

A survey research design was adopted for the study. The design is considered appropriate for the study because the study aims at finding out the integrating emerging technologies in business education curricula in tertiary institutions in Anambra State. The population of this study comprised 4750 Business education students from public tertiary institutions in Anambra state. Simple random sampling technique was used to select 750 students used for the study. Data for the study was collected by means of structured questionnaires developed by the researcher.. Copies of the questionnaires were administered by the researcher and four research assistants who were briefed and guided on the modalities for the administration and collection of the questionnaire. A period of four weeks was used for the distribution and collection of the instrument. The copies of questionnaire successfully retrieved were used for data analysis. Mean and standard deviation were used to answer the research questions while z- test statistics was used to test the null hypotheses at 0.05 level f significant.

In interpreting, a value equal or greater than2.5 is regarded as acceptance while values less than 0.5 means non-acceptance. In testing the null hypotheses, when p-value is less than or equal to 0.05 ($P \leq 0.05$), the null hypothesis will be rejected and when the p-value is greater than 0.05 alpha level ($p > 0.05$), the null hypothesis will not rejected.

Presentation and Analysis of Data

This chapter contains the analysis of data collected in the study. Data collected with respect to the two research questions and two hypotheses were analyzed and presented in Tables

Research Question 1

How does artificial intelligence affect business education curricula in tertiary institutions in Anambra State.?

Table 1: Mean responses on how AI affects business education curriculum

N	Ave. Mean	SD	Remarks
650	3.03	0.74	acceptance

Result presented in Table 1 shows artificial intelligence affected business education curricula in tertiary institutions in Anambra State. The average mean value of .3.03 indicated that there was a strong effect of artificial intelligence on business education curricula in institutions in Anambra State.

Research Question 2

How does block chain technology affected business education curricula in tertiary institutions in Anambra State?

Table 2: Mean responses on how block chain technology affects business education curriculum

N	Ave. Mean	SD	Remarks
650	2.74	0.81	acceptance

Result presented in Table 2 revealed that block chain technology affected business education curricula in tertiary institutions in Anambra State. The average mean value of .2.74 indicated that block chain technology has a strong effect on business education curricula in higher institutions in Anambra State.

Test of Statistical Hypotheses

Hypothesis 1

Ho_1: Artificial intelligence has no significant effect on business education curricula in tertiary institutions in Anambra State.?

Table 3: Test of Significance on Artificial intelligence and business education curricula in tertiary institutions in Anambra State

N	df	α level	z-cal	z-crit	Decision
650	648	0.05	27.48	1.960	Significant

Result presented in Table 5 reveals that the t-calculated value of 27.48 is greater than the critical value of 1.96 at 0.05 alpha level and 675 degree of freedom (27.48 > 1.960). The null hypothesis was rejected. This means that Artificial intelligence has significant effect on business education curricula in tertiary institutions in Anambra State

Hypothesis 2

Ho_2: Block chain technology has no significant effect on business education curricula in tertiary institutions in Anambra State

Table 4: Block chain technology has no significant effect on business education curricula in tertiary institutions in Anambra State

N	Df	α level	z-cal	z-crit	Decision
650	648	0.05	46.19	1.960	Significant

Result presented in Table 6 reveals that the t-calculated value of 46.19 is greater than the critical value of 1.96 at 0.05 alpha level and 675 degree of freedom (46.19 > 1.960). The null hypothesis was rejected. This means that Block chain technology has significant effect on business education curricula in tertiary institutions in Anambra State

Summary of Findings

Based on the study, the following major findings were found

i Artificial intelligence affected business education curricula in tertiary institutions in Anambra State

i. Block chain technology affected business education curricula in tertiary institutions in Anambra State

ii. Artificial intelligence has significant effect on business education curricula in tertiary institutions in Anambra State

iii. Block chain technology has significant effect on business education curricula in tertiary institutions in Anambra State

Discussion, Conclusion and Recommendations

The findings in research question one revealed that Artificial intelligence has significant effect on business education curricula in tertiary institutions in Anambra State

The finding agrees with Onekpe (2002) assertion that most youths that did not have access to formal education talks for restiveness. The findings also agreed with the opinion expressed in Federal Government of Nigeria (FRN, 2004) that students are only taught theory without the practical aspect of the courses. The study also revealed that the business educators generally accepted that all the items listed except lack of space/accommodation as major challenges of integrating the new technologies for teaching and learning business education programme in tertiary Institutions. This is because the mean scores were above 3.50 which was the cut of point or the boundary real limit. The first hypothesis revealed that there was no significant difference in the mean ratings of respondents on the challenges of integrating modern technologies in teaching and learning business education programme.

Block chain technology has significant effect on business education curricula in tertiary institutions in Anambra State

Block chain technology is forecast to disrupt any field of activity that is founded on time-stamped ledgers. Within education, activities that could be impacted by BC technology include

certification, management of student records, intellectual property management, issuing of payments and student information system architecture. Grech and Camilleri, (2017) stated that BC allows self-sovereignty whereby users can maintain direct control over the storage and management of their personal data; trust, as the technical infrastructure gives people enough confidence in its operations to carry through with transactions such as payments or the issuance of certificates. Transparency and provenance that enables users conduct transactions with the knowledge that each party has the capacity to enter into that transaction and immutability records that can be written and stored permanently, without the possibility of modification. Also in disintermediation there is no more need for a central controlling authority to manage transactions or keep records as parties have the ability to transact directly with each other, without the need for third parties through collaboration

Conclusion

Based on the findings of this study, it was concluded that there was a positively strong effect between Artificial intelligence and business education curricula in tertiary institutions in Anambra State. The study also concluded that there was a positively strong effect between Block chain technology and business education curricula in tertiary institutions in Anambra State.. Finally, the study concluded that integrating emerging technologies has significant positive effect on business education curricula in tertiary institutions in Anambra State Implications of the Study

Recommendations

Based on the finding of this study, the following recommendations were made:

1. Business educators should up-grade their skills/competencies on how to integrate new technologies in teaching
2. The three arms of the government (Federal, State and Local) should consider funding of business education programme in tertiary institutions a top priority considering the role it plays in National development.
3. The others stakeholders in Education should also contribute maximally to the funding of business education programme

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