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INFLUENCE OF ARTIFICIAL INTELLIGENCE ON DELIVERY OF BUSINESS EDUCATION COURSES IN UNIVERSITIES IN SOUTH-EAST

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Abstract

This study examined the influence of Artificial Intelligence on Delivery of Business Education courses in Universities in South-East. Two research questions were answered and two hypotheses tested at 0.05 level of significant. The research design was a descriptive survey. The population of the study was 80 Business Educators from Federal and State Universities in South-East. The instrument for data collection was a self-structured questionnaire and was validated by three experts while the reliability of the instrument was ascertained using Cronbach Alpha reliability method which yielded a reliability co-efficient of 0.78. Data collected were analyzed using mean and standard deviation to answer the research question while t-test was used to test the hypotheses. The results indicated that AI can influence instructional delivery of Business Education courses to a very high extent positively. It also revealed that it can influence instructional delivery of Business Education courses to a high extent negatively. There was no significant difference in the meaning rating of Federal and State Business Educators on the positive and negative influence of AL on instructional delivery of Business Education courses in Universities in South-East. The study recommended among others that awareness of AI should be enforced in all the universities in South-East to update the lecturers on the need for implementation of AI and its application in the teaching and learning processes.

Keyword: Artificial, intelligent, business education, universities

Introduction

Education is the basic instrument for economic growth, transformation and technological advancement of any society. It is an important aspect of life that cannot be ignored or toyed with. Mbaji and Ibezim (2019) opined that education has been described as the bedrock of any and every society which is aimed at national building and through which the needs and aspiration of the nations are achieved. In an attempt to achieve the purpose of education in any nation, a standard must be set which in turn help in determining the learners' success or achievement at the end of the learning process. That is why the method of every instructional delivery is important.

Instructional delivery refers to the interaction among the students, the teacher, the content and the knowledge/skills/dispositions students will need for learning and collaborating with others in a diverse society and rapidly changing world. Instructional delivery aims to ensure that students receive instruction that is delivered effectively and in a manner that allows content mastery (Ndom-Uchendu, 2023). Effective instructional delivery means that the teacher will build on existing knowledge, differentiate instruction and incorporate technology into lessons. Technology refers to methods, systems and devices which are the results of scientific knowledge being used for practical purpose. Technologically, the world is advancing, and teaching and learning are taking a different dimension as a result of technology. The most notable advancement in technology in the 21st century is the use of artificial intelligence instruction delivery. Artificial intelligence also abbreviated as (AI) is a rapidly evolving technology in recent times that tries to simulate human intelligence using machines. This enables them to perform a wide range of tasks, from simple to complex. According to Frankenfield (2023), AI is the simulation of human intelligence by software-coded heuristics. In education, Artificial Intelligence enables new forms of interaction. Students and teachers can speak, gesture, sketch, and use other natural human modes of communication to interact with a computation resource and each other. AI can generate human-like responses as well. According to UNESCO (2023), AI has the potential to address some of the biggest challenges in education today, innovate teaching and learning practices and

accelerate progress towards sustainable development goal 4 (SDG 4). Cox (2021) noted that the potential of AI and robots to reshape our future has attracted vast interest among the public, government and academia in the last few years. According to the researcher, AI is likely to change how education itself works, altering what learning is like, the role of teachers and researchers, and how universities work as institutions.

Learning using AI system is learning that has been modified so that it can improve learning achievement and students focus (Homes, Bialik and Fadel, 2019). This is because AI has the advantages of teaching students individually and marking the desired problem to find the correct and appropriate way of teaching students using artificial intelligence technology. According to Page and Gehtbach (2017), learning by utilizing the function of AI is personalized learning (learning that adapts the student needs) so that it can improve students learning experiences and make students better understand a subject matter. AI is capable of increasing students focus in learning because it can teach students to learn individually and be able to recognize the surrounding environment needed to find the right way of learning for students. It can also improve students' achievement during instructional delivery.

Instructional delivery entails the interaction among the students, the teacher, the content and the knowledge/skills/disposition students will need for learning and collaborating with others in a diverse society and rapidly changing world. It could also be defined as the knowledge of teaching techniques and their application for learning to take place in such a flexible manner that would not distort the original intent of the teacher for being in the classroom.

On the influence of AI in instructional delivery, that Business Educators seem to be of the view that AI is replacing the lecturers in many ways such as blended learning and e-learning. Jlu and Laurie (2018) are of the view that the presence of an e-learning lecturer is limited as learner interact with a virtual classroom, whether on Blackboard, Moodle, Turnitin or any other platform. Pooja, Ruddesh, Vikas & Abhishek (2021) believe that AI is meant to revolutionize how we learn, teach, work, live, make decision, and be ready for the AI era. However, it is not only about its superficial effect, but about the radical changes in the teaching and learning process that will follow. It is assumed that AI will provide deep learning and teaching processes to get higher performance from both the tutor and the tutee. Also adopting hypermedia for a writing class will facilitate mistakes and reduce time consumption. Before discovering AI, it took ages for a teacher to assess and grade papers and check for plagiarism. But with AI, checking for academic integrity and language issues will take minutes or less. In using AI, a lecturer submits the work to Turnitin, grammarly or other software, in minimal time, it can provide constructive feedback based on the results generated by the software used.

In education AI has various positive influences such as personalized learning which has the capability to analyze individual students' data; enabling the provision of personalized learning experiences that cater to each students' needs and preferred learning styles. As a result, students can progress at their own pace and receive the necessary assistance for their academic success. AI can improve engagement and motivation which create more interactive and engaging learning experiences that can help students stay focus in their learning. They enhanced assessment and feedback which can provide more accurate and timely assessment and feedback to help students track their progress and identify areas where they need additional support. Also, AI can increase access to education by giving more personalized and affordable learning opportunities, improved teacher training which can help to improve teacher training by improving teachers with data and insights that can help them better understand their students and their needs (Zoubarer, 2023).

Although AI has the potential to improve productivity, boost creativity and enhance the human experience, it may create a sense of uncertainty about the future hence we strive to create AI technologies that bring positive change to the society. Some of the negative influences of AI as enumerated by include displacement of due to job automation in certain industries which affects the job market and work force; misuse of AI technologies, data privacy and algorithm bias may arise; Lack of creativity and empathy

which lacks human qualities, limiting the ability to understand emotions or produce original ideas; Developing and implementing AI system can be expensive and it requires specialized knowledge and resources; AI systems may not always be fully reliable, leading to distrust in their decision-making capabilities, and over-reliance on AI can make human dependent on technology and reduce critical thinking skills (Zoubarer 2023)

AI seems to offer various learners links about the topics required by the subject matter and eases and inspires both Business Education students and the Business Educators by addressing different learning styles such as autonomous learning, visual learning, e-learning, audio-visual learning, and deep learning. AI enables the lecturer to select and apply the learning method that the learner needs and highlights the area of improvement to be focused on (Kitano, 2016). It reinforces independent learning as the learner becomes autonomous and free to access input anytime and anywhere the Business Education learners inclusive.

Business education is an aspect of total education programme that provides functional and saleable skills, knowledge, understanding, attitude or value needed to perform in the business world as producer or consumer of goods and services that all business offers (Akinpelu, 2017). Business Education represents a broad and diverse discipline that is included in all types of educational delivery systems which are primary, secondary and tertiary institutions. Those who teach in these schools are known as Business Educators. Business educators must have broad knowledge in all the major components of business, he or she must be knowledgeable in general education, and general business subjects/courses with the view of improving the quality of instructional delivery in business education programme (Anioke, 2019). According to Onuoha (2017), a quality Business Educator is that teacher who help students develop to their maximum capacity especially those students who desire to work in the business world by developing in them the basic skills and knowledge.

Amadike and Obara (2020) observed that some skills and knowledge of these teachers are likely to become obsolete because of lack of updating them hence they need to update themselves through attending seminars, workshops, conferences and so on. This can enable students to acquire adequate knowledge, skills and competencies that are appropriate for their area of responsibility that would enable them meet the needs of labour workforce.

Some studies had been carried out on influence of artificial intelligence but there appears to be little or no research on influence of Artificial Intelligence on delivery of Business Education courses in universities in South East hence the thrust of this study.

Statement of Problem

It is true that AI in education is often surrounded by myths and concerns about replacing teachers or losing human connection. There is also widespread implications for the advancement of AI to the point where a computer can serve as a personalized tutor able to guide and manage students learning and engagement. This opens to the worrying possibility to see a superficial, but profitability, approach where teaching is replaced by AI automated solutions. However, it is important to grasp that AI is not intended to replace educators but to complement and enhance their abilities. By adopting automation in carrying out routine tasks and offering real-time data analysis, AI systems enable teachers to focus on what they do best, provide guidance, give emotional support, foster creativity and critical thinking in students. Especially as we are at a point where we need to find a new pedagogical philosophy that can help students achieve the set of skills required in the twenty first century for a balanced civic economic and social life. The problem of this study therefore is in what ways can AI influence instructional delivery of Business Education courses.

Research Questions

The following research questions guided the study.

1. To what extent can AI influence instructional delivery of Business Education courses in universities in South-East positively?
2. To what extent can AI influence instructional delivery of Business Education courses in universities in South-East negatively?

Hypothesis

The following null hypothesis were tested at 0.05 level of significance

$H0_1$: There is no significant difference between the mean rating of Federal and State Business Educators on the positive influence on instructional delivery in of Business Education courses in universities in South East.

$H0_1$: There is no significant difference between the mean rating of Federal and State Business Educators on the negatively influence on instructional delivery in of Business Education courses in universities in South East

Method

A descriptive survey research design was employed to determine the influence of AI on delivery of Business Education courses in universities in the South-East Nigeria. The population for the study was 80 Business Educators made up of 36 Federal Business Educator and 44 State Business Educators in South East Nigeria. There was no sampling technique adopted because the population was manageable.

The instrument for data collection was a self-structured questionnaire and was validated by three experts, two from Business and Entrepreneurship Education Department, Enugu State Science and Technology and one from Measurement and Evaluation Department, Abia State University, Uturu. The instrument was subjected to reliability test which yielded 0.78 using Cronbach Alpha. The whole questionnaire was duely, filled and returned given 100% return rate. Mean and standard deviation were used to answer the research question, while t-test was used in testing the null hypothesis at 0.05 level of significant. Decision was taken using upper and lower limit of the scale values on a four-point scale of Very High Extent (VHE) 3.50 – 4.00 High Extent (HE) 2.50 – 3.49 Low Extent (LE) 1.50 – 2.49 Very Low Extent (VLE) 1.00 – 1.49

2.50 and above is positive while below 2.49 is negative.

Results

Research Question One: To what extent can AI influence instructional delivery of Business Education courses in universities in South-East positively?

Table 1: Mean Responses of Respondents on Positive Influence of AI on Instructional Delivery of Business Education Courses in Universities

S/N	Extent of AI Positive Influence on Instructional Delivery of Business Education Courses in Universities	Mean	Std. Dev.	Remark
1	Personalized learning	3.04	.892	VHE
2	Instant feedback	2.96	.934	HE
3	Access to advanced educational resources	2.86	.868	HE
4	Development of intelligent tutoring system	3.05	.840	VHE
5	Reduce human error	3.05	.825	VHE
6	It enhances decision making	3.34	2.386	VHE
7	It enhances 24 x 7 availability	2.97	.811	HE
8	It leads to digital assistance	3.09	.889	VHE
9	It brings new invention	3.13	.802	VHE

10	It leads to unbiased decision	3.14	.791	VHE
11	It performs repetitive jobs	3.04	.803	VHE
12	It leads to daily application	3.18	.742	VHE
13	It is effective in risky situation	3.07	.854	VHE
14	It helps in medical applications	3.05	.913	VHE
15	It excels in automating repetitive tasks	2.90	.894	HE
16	It increases efficiency and productivity	2.79	.910	HE
17	It enhances fraud detection	2.89	.981	HE
18	It enhances full time availability	3.09	.799	VHE
19	It identifies better human work flow	3.06	.817	VHE
20	Personalizes recommendations for customers	2.93	.965	HE
21	It improves security and surveillance	3.05	.855	VHE
22	It helps to improve customers services	3.05	.855	VHE
23	It helps identifying and mitigate bias in decision-making process, promoting fairness and equity	3.05	.794	VHE
24	Improve engagement and motivation	3.00	.827	VHE
25	Enhance assessment and feedback	3.13	.817	VHE
26	Improve teacher training	3.00	.871	VHE
	Grand Mean	**3.03**	**.912**	**VHE**

Table 1 shows the extent AI can influence instructional delivery of Business Education courses in universities in South-East positively. All items revealed mean scores above the criterion bench mark of 2.50. With a grand mean of 3.03, we can deduce that AI can positively influence instructional delivery of Business Education courses in universities in South-East to a very high extent.

Research Question Two: To what extent can AI influence instructional delivery of Business Education courses in universities in South-East negatively?

Table 2: Mean Responses of Respondents on Negative Influence of AI on Instructional Delivery of Business Education Courses in Universities

S/N	Items on negative influence	Mean	Std. Dev.	Remark
1	Job displacement	2.85	.969	HE
	Lack of creativity and Empathy	3.15	.797	VHE
3	Cost and complexity	2.95	.810	HE
4	Reliability and trust	3.00	.779	VHE
5	Dependence on technology	2.80	.877	HE
6	Job displacement	2.65	.915	HE
7	Cost and complexity	2.70	1.011	HE
8	Creativity and empathy	2.75	.893	HE
9	Reliability and trust	2.85	.915	HE
10	Ethical concern	3.15	1.020	VHE
11	Lack of emotional intelligence	2.80	.933	HE
12	High cost	2.90	1.001	HE
13	Security risk	2.95	.980	HE
14	Encouraging human laziness	3.00	1.006	VHE
15	Privacy concern	2.85	.858	HE
16	Unemployment	3.25	.540	VHE
17	Biased	1.33	.725	LE
18	Algorithms development concern	2.55	1.168	LE

19	Environmental issues	3.28	.914	VHE
20	Lack of common sense	1.85	.969	LE
21	No ethics	1.41	.495	LE
22	Interpretability and transparency	2.96	1.084	HE
23	No improvement	1.54	.810	LE
	Grand Mean	**2.67**	**.889**	**HE**

8Table 2 shows the extent AI can influence instructional delivery of Business Education courses in universities in South-East negatively. Majority of the items revealed mean scores above the criterion benchmark of 2.50. With a grand mean of 2.67, we can deduce that AI can negatively influence instructional delivery of Business Education courses in universities in South-East to a high extent.

Hypothesis One

There is no significant difference between the mean rating of federal and State Business Educators on the positive influence of AI on instructional delivery in of Business Education courses in universities in South East.

Table 3: Summary of t-test showing the differences between the mean rating of Federal and State Business Educators on the Positive Influence of AI on instructional delivery of Business Education

S/N	Variables	N	$\bar{x}$	σ	T	Df	t-Crit	Sig-2tailed	Decision
1.	Federal	36	3.06	.270	1.158	78	1.96	.250	NS
2.	State	44	3.00	.210					

Table 3 shows the summary of t-test which assumed that There is no significant difference between the mean rating of federal and State Business Educators on the positive influence of AI on instructional delivery in of Business Education courses in universities in South East. The table shows a mean score of 3.06 and 3.00 for Federal and State universities respectively. It indicated that t (78) = 1.158, p = .250 › 0.05. That is, the result of t – value of 1.158 resulting in .250 significance value, which was greater than 0.05 alpha value. This implies that the hypothesis was accepted and retained as stated.

Hypothesis Two

There is no significant difference between the mean rating of male and female Business Educators on the negatively influence on instructional delivery in of Business Education courses in universities in South East

Table 3: Summary of t-test showing the differences between the mean rating of Federal and State Business Educators on the Negative Influence of AI on instructional delivery of Business Education

S/N	Variables	N	$\bar{x}$	σ	t	Df	t-Crit	Sig-2tailed	Decision
1.	Federal	36	2.69	.261	.532	78	1.96	.972	NS
2.	State	44	2.66	.271					

Table 4 shows the summary of t-test which assumed that there is no significant difference between the mean rating of federal and State Business Educators on the negative influence of AI on instructional delivery in of Business Education courses in universities in South East. The table shows a mean score of 2.69 and 2.66 for federal and state universities respectively. It indicated that t (78) = .532, p = .972 ›

0.05. That is, the result of t – value of .532 resulting in .972 significance value, which was greater than 0.05 alpha value. This implies that the hypothesis was accepted and retained as stated.

Discussions

The result obtained from research question 1 Table 1 showed that AI can influence instructional delivery of Business Courses positively in South East University. This is evidence from the fact that Business educator in South East University acknowledge that AI is capable of increasing students focus in teaching and learning because it can teach students to learn individually. The findings of the above stud is consistent with the findings of Lawlor and Chang (2023) who noted that AI influences an individual to have increase access to education, personalized learning, improve engagement and motivation, enhanced assessment and feedback etc. The result of the tested hypothesis revealed that there was no significant difference in the mean rating of Federal and State Business Educator on the positive influence of AI on instructional delivery of Business Education course in University in South-East.

The findings of the study for research question 2 Table 2 revealed that the extent to which AI can influence instructional delivery of business education courses in universities in South-East is to a high extent. Business educators believes that AI will replace lecturers in many ways hence there will be job displacement, dependency on technology, encouragement of human laziness etc. This is in agreement with the findings of Jlu and Laurie (2018) and Lawlow and Chang (2018) who noted that the use of AI may lead to loss of jobs by people, raising of ethical concerns, lack of creativity and empathy etc. Also, the findings of hypothesis two reveals that there is no significant difference in the mean rating in the Federal and State educator on the negative influence of AI on instructional delivery of Business Education courses in universities of South-East.

Conclusion

AI is the part of information that exists as a form or way to improve student learning achievement. It is also a technology that can assist Business Educators during learning processes and help students to better understanding of the subject matters. However, it is bound to have both positive and negative influences. Business Educators therefore should be well trained in AI to provide learners with the necessary skills to handle future care concerns to avoid the negative influence of AI. Artificial intelligence if optimally used can increase the intelligence of students and help Business Educators in obtaining an effective and efficient learning atmosphere that is liked.

Recommendations

Based on the findings of the study and conclusion drawn above, the following recommendations were made.

1. Awareness of AI should be enforced in all the universities in South-East to update the lecturers on the need for implementation of AL and its application in the teaching and learning processes to enforce positivity
2. Institutions should establish support systems for Educators to share best practices, collaborate on AI integration strategies and address challenges collectively to avoid negativity.
3. The university management should collaborate with Government to organize training for Business Educators on the application of AI in the teaching and learning process in universities in South-East, thereby dismissing the idea that AI will take over their jobs.

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