

Teaching Learners Artificial Intelligence Tools for Effective and Efficient Digital Entrepreneurship in Public Tertiary Institutions in Rivers State

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Abstract

This study explored teaching learners artificial intelligence tools for effective and efficient digital entrepreneurship in public tertiary institutions in Rivers State. Two research questions guided the study and two null hypotheses were tested. Descriptive survey research design was adopted. From a population of 123 entrepreneurship lecturers, a census survey sampling was employed. A four-point response options questionnaire was used for data collection, and it was validated by three experts. The reliability of the instrument was established using Cronbach's alpha which yielded coefficients of 0.77 and 0.78. Mean and Standard Deviation were used to answer the two research questions and measure the spread in respondents' opinions, while one-way analysis of variance (ANOVA) was used to test the two null hypotheses at 0.05 level of significance. Findings revealed that those AI tools to teach learners are very highly needed and will lead to effective and efficient digital entrepreneurship activities. It also showed that educational attainment and years of teaching experience play vital roles in teaching AI tools to learners for effective and efficient digital entrepreneurship activities. Consequently, it was concluded that if AI tools are included in the curriculum, it will transform the programme positively, lead to AI skills development and enable the learners to acquire the needed AI employability skills. Among other things, it was recommended that AI tools should be included in entrepreneurship curriculum through yearly internal curriculum review by lecturers in collaboration with their institutions and five years national review by all levels of government.

Keywords: *teaching, learners, artificial intelligence (AI), artificial intelligence tools, effective and efficient digital entrepreneurship.*

Introduction

The tremendous improvement from Artificial Intelligence (AI) seems to be reshaping numerous sectors, including the business environment. In particular, digital entrepreneurship is undergoing significant transformations due to AI's capabilities and tools.

In picturing the future jobs and successful business managers requirements, business teachers must equip learners (students) with the proficiency of digital entrepreneurship tools that will make them effective and efficient in the engagement of entrepreneurial activities for successful enterprises management (Ukata & Agburuga, 2024a).

Planning for Teaching and Teaching

Planning for teaching is preparation in creating a mental picture or framework of the nature of classroom interaction between the teacher and students, students and objectives, students and students during instruction or teaching and learning sessions (Ukata, Wechie, & Nmehielle, 2017). Planning for teaching includes foreseeing the kind of instruction or teaching to be given to the learners, instructional materials and media to be used, activities to be carried-out and level of interactions in the classroom environment, bearing in mind the age of the learners (Ukata & Kalagbor, 2017). Teaching is an attempt to assist people acquire knowledge, entrepreneurship skills, attitudes, ideas or appreciation. Teaching is also an interaction between teachers and students under the auspices of the teacher in order to bring about the expected change in the students' behavior (Ukata & Silas - Dikibo, 2019). Teaching is a great profession, it is an act of relating information to the learner or assisting in the learning on how to do something in a required manner (Ukata & Nmehielle, 2020). It is a process of assisting the learner to gain useful skills, attitudes, ideas, values in a designed and undersigned environment that will help the learner become an acceptable person to the society as well as be independent in life. Teaching leads to learning (Ukata & Silas-Dikibo, 2021). Teaching is an exchange of ideas between a teacher and students (learners) on what to learn, how to learn, what to use in learning and what to do with the learning (Ukata, 2019a).

Learners

Learners are persons involved in the learning process, regardless of age, circumstance, or location. Whether they are enrolled in formal schooling, self-directed learning, or professional development, it encompasses kids, teens (youths), and adults. The word "learners" highlights the active part people play in learning new things and is inclusive of different learning environments. Conversely, people who are enrolled in formal educational institutions like schools, colleges, or universities are usually referred to as students. People who participate in informal or self-directed learning may not be included in this more particular phrase. However, in the context of this study, both learners and students are used interchangeably (Skill-keep, 2023).

Artificial Intelligence (AI)

AI is the theory and development of computer systems that are able to perform tasks requiring human intelligence, such as business management, teaching, visual perception, speech recognition, decision-making, and translation between languages (Ukata & Agburuga, 2024a; Ukata & Agburuga, 2024b; Pattam, 2021). Artificial intelligence is the science of making

machines to think and act like humans. AI is an advanced part of information and communication technology (ICT) which adopts the application of hardware and software in imitation to demonstrate what human beings can do by those technologies (Ukata & Amini, 2024).

Artificial Intelligence Tools

AI tools are software applications that use artificial intelligence algorithms to perform a specific task and solve problems that ordinarily would have been done by human being. AI tools can be used in a variety of ways from healthcare industries to business, finance, sales, marketing to image generators, video creation to education, contents, and many more. Artificial Intelligence has now become a big part of present and future generations, moreover in this era of digital entrepreneurship. These AI tools may include Market Research and Trend Analysis, business simulation, conversica, ChatGPT, Grammarly, among others (Geeksforgeek, 2024).

Entrepreneurship

Entrepreneurship is an organized process of identifying society problems, planning, organizing resources together and executing the plan to solve the problem to satisfy the customers so as to retain their loyalty and keep the business running. Entrepreneurship is also identifying the needs (problems) of the immediate environment, pulling resources together with a calculated risk for the reason of satisfying the customers and making profit (Ukata & Adejola, 2018). Although the reason for going into business is for profit making, entrepreneurs must learn how to satisfy their customers first so as to command their loyalty for the sustainability of the business. Entrepreneurs must also learn to take calculated risk so as to reduce loss at all times (Ukata, Kalagbor & Ochie, 2017). The effectiveness and efficiency of entrepreneurial activities which focus on nurturing entrepreneurial attitudes and abilities are aimed at fostering innovation, creativity, and practical business skills for success. The business environment today is in the world wide web or internet, therefore, the need for digital entrepreneurship with the needed skills development. The overall objectives for a course in entrepreneurship education are: practical skills, technical skills development, business management skills development and personal entrepreneurial skills development, among others, (Ukata, 2019a).

Effectiveness in entrepreneurship and Efficiency in entrepreneurship

Effectiveness in entrepreneurship is the ability to reach organizational goals by following the established process and this can be measured by key performance indicators (output) or feedback from customers on how good or bad the organization is doing. Effectiveness in entrepreneurship is how professionals in a business organization are able to achieve organizational targets by following the established process by the organization. Effectiveness in entrepreneurship is how team members in business are focusing on completing their tasks according to the company's established standard. Efficiency in entrepreneurship involves personnel maximizing the available resources, time, and money to achieve the company's objectives, and can be tracked by looking at the impact on revenue and inventory rate of turnover. Efficiency in entrepreneurship shows how team members focus on reducing expenses, saving time and resources while ensuring they achieve the best result or make profit (Indeed Career Guide, 2024). You can measure your efficiency in the company by tracking how your contributions have resulted in a change in the company's revenue and inventory rate of turnover.

In effectiveness and efficiency in entrepreneurship, to achieve organizational goals with positive key indicators such as customer satisfaction, maximum output and make profit may be possible via the application of AI to create digital entrepreneurship tools.

Digital Entrepreneurship

Digital entrepreneurship is that entrepreneurship that involves the use of internet and novel digital technologies. Entrepreneurs were typically thought of as small business creators and owners working with small businesses like restaurants and stores via the use of artificial intelligence. Digital entrepreneurship as well refers to running a business online (Ukata & Amini, 2022). It encompasses various activities, such as being an online course creator, blogger, podcaster, or selling digital or physical products. Digital entrepreneurs leverage on technologies to find and satisfy customers, reduce costs, and collaborate with others (Mailchimp, 2024). This means you can only do this business effectively and efficiently through the use of AI tools.

Digital Entrepreneurship Skills Development

Digital entrepreneurship skills development is the process of acquiring modern day business skills that involve the use of the internet, AI tools and novel digital technologies. It is the learning of skills that encompasses various activities, such as doing an online course creator, blogger, podcaster, or selling digital or physical products that will assist one run online business successfully (Ukata & Silas-Dikibo, 2022). Digital entrepreneurship skills development is to leverage technologies to find and satisfy customers, reduce costs, and collaborate with others for efficient and effective business management. This learning may take place under the auspices of the teacher or learning independently via watching online videos or reading materials.

Types Of AI Tools To Teach Learners For Effective And Efficient Digital Entrepreneurship

According to Crescenzi-Lanna (2023), artificial intelligence has applications across many fields, such as entrepreneurship education, finance, automotive, entertainment, and more, and it is rapidly transforming industries through automation and intelligent decision-making systems. Artificial intelligence (AI) tools are becoming key assets in Business and Entrepreneurship Education, offering tools that enhance learning, streamline operations, and develop critical thinking. Accordingly, the following stated and explained are some of the AI tools needed to teach learners for effective and efficient digital entrepreneurship skills development, (Amesi & Peterside, 2024).

Business Simulations

Simulation venture in artificial intelligence provides business simulation environments where business and entrepreneurship education lecturers and students can practice decision-making in realistic business scenarios. AI-driven simulations can also be used to let students or graduates of business and entrepreneurship education run virtual companies by helping them understand market dynamics, finance, and management.

Market Research and Trend Analysis

Crimson hexagon, an artificial intelligence empowered students and lecturers as an insights tool that analyses online conversations and trends, provides data-driven insights for business

strategy. Example, google trends and think with google utilizes artificial intelligence to analyse search trends, which could also be used to help business and entrepreneurship education students to identify emerging market demands and consumer behaviours.

In this way, business and entrepreneurship education students will be effective and efficient in market research and trend analysis.

Financial Management

Financial tools like QuickBooks and Xero artificial intelligence tools to automate bookkeeping, generate financial reports, and provide insights into cash flow management. Also Kabbage and Fundbox are artificial intelligence-driven platforms that could offer business and entrepreneurship education students quick access to working capital through data-driven lending models.

ChatGPT

This is an AI-driven chatbots tool that offers instant, interactive learning experiences. For example, students can ask complex business and entrepreneurship education questions, by engaging in scenario-based learning, or get feedback on business and entrepreneurship related plans. It also helps to create custom chatbots that simulate students' interactions, project inquiries, or business consultations which are of usefulness in customer service skills development and delivery.

Based Mentorship and Networking

This is an Artificial intelligence-driven tool like MentoBot, a connecting device that connects business and entrepreneurship students with virtual mentors or coaches, by offering advice, feedback, and guidance on various business-related issues. Business and entrepreneurship education students could also use devices like LinkedIn's to help them connect with the right networks based on interests, industry trends, and mutual connections.

Pitching and Funding

An artificial intelligence software like Pichbol is a tool that could help business and entrepreneurship education students refine their pitches by offering feedback on presentation structure, storytelling, and investor interests. The Gust for instance is also an artificial intelligence-driven platform that could also help students and graduates to connect with investors, streamlining the pitch process with data insights and matching capabilities.

How AI Will Lead to Effective And Efficient in Digital Entrepreneurship

The following are some of the ways artificial intelligence may be used for effective and efficient digital entrepreneurship. They are as stated and explained below, (Nwadiuto, 2024):

Use Enhancing Critical Thinking and Decision-Making Through AI Simulations

AI-based simulations provide realistic business scenarios that allow students to practice decision making in complex environments. These tools replicate market dynamics, customer

behaviors, and financial risks, offering practical experience that develops critical thinking skills and prepares students for real-world business challenges.

Empowering Strategic Decision-Making with Data Analytics Skills

Integrating AI technologies like machine learning and advanced data analytics into business education equips students with the skills to analyze large datasets for strategic purposes. This capability is essential for understanding market trends, predicting consumer behavior, and evaluating business performance, making graduates more competent in data-driven decision making.

Enhancing Student Support and Engagement with AI-Powered Virtual Assistants

AI-driven virtual assistants and chatbots provide instant, round-the-clock support by answering queries, guiding students through coursework, and offering additional learning materials. These tools increase student engagement, provide immediate assistance, and create a more interactive and responsive educational and business environment.

Supporting Aspiring Entrepreneurs with AI-Enhanced Business Planning Tools

AI planning tools provide aspiring entrepreneurs with valuable insights into market trends, consumer behavior, and competitive landscapes. These tools assist in developing business models, forecasting outcomes, and designing effective marketing strategies. AI-driven platforms also facilitate connections with mentors, investors, and other resources, increasing the likelihood of entrepreneurial success.

Facilitating Remote Learning and Fostering Global Collaboration

AI-powered tools support remote learning by providing robust online platforms for virtual classrooms, webinars, and collaborative projects. These tools help maintain student engagement and promote collaboration among geographically dispersed participants, making business and entrepreneurship education more accessible worldwide.

Facilitating Networking and Mentorship through AI-Driven Connections

AI-powered platforms enhance networking opportunities by connecting students with industry experts, mentors, and peers. By using AI tools to match participants based on shared interests, goals, and needs, these platforms provide personalized mentorship and valuable professional connections essential for entrepreneurial success.

Subjects and Moderating Variables of the Study

The subjects for this study are male and female entrepreneurship lecturers who teach entrepreneurship with different levels of educational attainment and years of teaching experience in public tertiary institutions in Rivers state. Ezenwafor and Ukata (2022a) averred that how well lecturers demonstrate the knowledge of AI tools related to teaching experience depend on their level of educational qualification, training and retraining, age and teaching experience. For example, lecturers with higher degrees such as PhD and M.Sc./M.Ed. are expected to possess

higher knowledge and skills in AI tools related to teaching experience than those with HND/B.Sc./B.Ed (Ukata & Udeh, 2022; Ezenwafor & Ukata, 2022b). Accordingly, Ukata and Okeke (2023), and Ukata and Nmihelle (2022) claimed that teaching experience and age are among the factors that influence lecturers' knowledge and skills in AI tools related to teaching experience because younger and experienced lecturers are more likely to possess them than older and less experienced ones. Also, lecturers who have spent above 10 years in teaching AI-related courses are expected to possess higher knowledge and skills to be able to identify the types of AI tools for effective and efficient digital entrepreneurship than those with 6 to 10 and 1 to 5 years teaching experience. Consequently, the study tested the influence of these respondents' educational attainment and years of teaching experience (three levels of moderating variables) with AI tools related to knowledge and skills in teaching artificial intelligence tools to learners for effective and efficient digital entrepreneurship in public tertiary institutions in Rivers state.

Statement of the Problem

Artificial Intelligence (AI) seems to be reshaping numerous sectors, including the business environment. In particular, digital entrepreneurship looks like undergoing significant transformations due to AI's capabilities and tools. In picturing the future jobs and successful business managers requirements, business teachers must equip learners (students) with the proficiency of digital entrepreneurship tools to make them effective and efficient in the engagement of entrepreneurial activities. Despite the available AI tools and the seemingly benefits to teach learners for effective and efficient digital entrepreneurship, lecturers seem not knowledgeable and skillful in the tools. Learners also seem not to be prepared with the needed AI tools for digital entrepreneurship. The reasons may be associated with the fact that AI tools are not included in the Core Curriculum and Minimum Academic Standard for Nigerian University System (CCMAS) of the different programme published by the National Universities Commission in 2022, National Board for Technical Education (NBTE) and National Board for Colleges of Education (NBCE), resulting in the lack of knowledge about the available types of AI tools and skills required in teaching AI tools to learners for effective and efficient digital entrepreneurship. The findings of this study will close the gap in the body of knowledge since there is no study with an exact purpose like this.

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean rating of male and female lecturers on the AI tools to teach learners for effective and efficient digital entrepreneurship based on their educational attainment.
2. Male and female lecturers do not differ in their mean rating on how the AI tools to teach learners will lead to effective and efficient digital entrepreneurship based on their years of experience.

Methodology

The study adopted a descriptive survey research design. Descriptive survey research design was deemed appropriate since it sought to obtain the views of entrepreneurship lecturers on the topic. The population of the study was 123 lecturers selected from the Federal College of Education

(Technical) Omoku (57), Rivers State University (21) and Ignatius Ajuru University of Education (12), Captain Elechi Amadi (14) and Ken Sarowiwa Polytechnic (10). Census survey technique was adopted to sample all the 123 entrepreneurship lecturers because it was of manageable size. The instrument used for data collection was a self-designed four-point response options questionnaire titled "Teaching learners artificial intelligence tools for effective and efficient digital entrepreneurship (TAITLEEDE)". It contains two sections. Sections A and B. Each section carries 6 items and were rated as very highly (4.50 - 5.00), highly (3.50 - 4.49), moderately (2.50 - 3.49), and lowly (1.50 - 2.49). The questionnaire was subjected to face and content validation by three experts from the Faculty of Education in Nnamdi Azikiwe University, Awka. The measure of internal consistency method was used to establish the reliability of the instrument. The instrument was administered to 15 lecturers from the University of Uyo who were not part of the population of the study. Cronbach's alpha was applied to compute the reliability coefficient which yielded alpha values of 0.77 and 0.78. These high reliability coefficients show that the instrument was reliable for the study as recommended by Nworgu (2015) that a research instrument with a reliability index of 0.70 and above is reliable. The researcher(s) personally administered the copies of the questionnaire to the respondents in their schools with the help of three research assistants who were adequately briefed on the modalities to follow.

The researcher(s) first visited each of the tertiary institutions and sought consent from the relevant Heads of Department for the study. Thereafter, the researcher(s) and assistants visited each school and handed over the required number of copies of the instrument to the Heads of the Department to distribute to the lecturers for completion and, revisited after five working days to retrieve the completed copies. Ninety-five copies of the instrument, representing 77%, were correctly filled, retrieved and used for the data analysis. The arithmetic mean and standard deviation were used to answer the two research questions and ascertain how homogeneous or heterogeneous the respondents' opinions were relative to the questionnaire items and the aggregated mean. The one-way analysis variance (ANOVA) was used to test the null hypothesis at 0.05 level of significance. The ANOVA was used for the two null hypotheses because it measured one categorical independent variable with three levels of moderating variables. A null hypothesis was accepted where the calculated significant (Sig.) value, (p- value) was greater than or equal to (\geq) the alpha value of 0.05. Otherwise, the null hypothesis was rejected. The data analysis was carried out using Statistical Package for Social Sciences (SPSS) version 25.

Result Presentation, Analysis and Discussion

Research Question 1

What are the AI tools to teach learners for effective and efficient digital entrepreneurship in public tertiary institutions in Rivers state?

Table 1: Respondents' mean ratings on AI tools to teach learners for effective and efficient digital entrepreneurship. N = 95

SN	AI tools for effective and efficient digital entrepreneurship	\bar{X}	SD	Remarks
1	Business Simulations	4.55	.83	Very Highly
2	Market Research and Trend Analysis	4.53	.82	Very Highly
3	Financial Management	4.54	.81	Very Highly
4	ChatGPT	4.52	.83	Very Highly
5	Based Mentorship and Networking	4.51	.82	Very Highly
6	Pitching and Funding	4.56	.84	Very Highly
	Aggregated Mean	4.53		Very Highly

Table 1 shows that all the 6 listed AI tools to teach learners are very highly needed for effective and efficient digital entrepreneurship with mean scores that ranged from 4.51 to 4.56. In the same manner, the aggregated mean score of 4.53 also shows the AI tools to teach learners are very highly needed for effective and efficient digital entrepreneurship activities. The standard deviations for the 6 listed items ranged within 0.81 to 0.84 which shows that respondents were homogeneous in their opinions that all the mentioned AI tools to teach learners are very highly needed for effective and efficient digital entrepreneurship in public tertiary institutions in Rivers state.

Research Question 2

How will the AI tools to teach learners lead to effective and efficient digital entrepreneurship in public tertiary institutions in Rivers state?

Table 1: Respondents' mean ratings on how the AI tools to teach learners will lead to effective and efficient digital entrepreneurship N = 95

SN	How AI tools will lead to effective and efficient digital entrepreneurship	\bar{X}	SD	Remarks
1	AI-based simulations enhancing critical thinking and decision-making	4.54	.71	Very Highly
2	Machine learning with data analytics skills leads to strategic decision-making	4.53	.72	Very Highly
3	AI-driven virtual assistants and chatbots provide instant, round-the-clock support by answering queries from clients	4.52	.71	Very Highly
4	AI tools provide aspiring entrepreneurs with valuable insights into market trends and consumers behavior	4.51	.73	Very Highly
5	AI-powered tools facilitate remote learning and foster global collaboration among entrepreneurs	4.50	.72	Very Highly
6	AI-powered platforms enhance networking opportunities by connecting students with industry experts, mentors, and peers	4.52	.74	Very Highly
	Aggregated Mean	4.52		Very Highly

Table 2 shows how highly all the listed 6 AI tools to teach learners will lead to effective and efficient digital entrepreneurship with mean scores that ranged from 4.50 to 4.54. In the same way, the aggregated mean score of 4.52 also shows that very highly, all the AI tools to teach learners will lead to effective and efficient digital entrepreneurship. The standard deviations for the 6 listed items ranged within 0.71 to 0.74, which illustrate that respondents were homogeneous in their opinions with a very high standard, revealing that AI tools will lead to effective and efficient digital entrepreneurship in public tertiary institutions in Rivers state.

Hypotheses Testing

Table 3: ANOVA summary of lecturers on the AI tools to teach learners for effective and efficient digital entrepreneurship based on their educational attainment

Sources of Variance	Sum of Squares	Df.	Mean Square	F-cal.	Sig.	Decision
Between Groups	2.358	2	1.139	1.189	.183	Accept H ₀₁
Within Groups	54.357	93	.679			
Total	57.615	95				

Table 3 shows a calculated F-value of 1.8 with a significant (sig.) p-value of 0.18 which is greater than the alpha value of 0.05 ($0.18 > 0.05$) at degrees of freedom of 2 and 93. Therefore, the null hypothesis (H₀₁) was accepted. This means that there is no significant difference in the mean rating of male and female lecturers on the AI tools to teach learners for effective and efficient digital entrepreneurship based on their educational attainment.

Table 4: ANOVA summary of lecturers on how the AI tools to teach learners will lead to effective and efficient digital entrepreneurship based on their years of experience

Sources of Variance	Sum of Squares	Df.	Mean Square	F-cal.	Sig.	Decision
Between Groups	1.741	2	.740	1.261	.242	Accept H ₀₂
Within Groups	46.959	93	.694			
Total	47.600	95				

Data on Table 4 shows a calculated F-value of 1.26 with a significant (sig.) p-value of 0.24 which is greater than the alpha value of 0.05 ($0.24 > 0.05$) at degrees of 2 and 93. Therefore, the null hypothesis (H₀₂) was accepted. This means that male and female lecturers do not differ in their mean rating on how the AI tools used to teach learners will lead to effective and efficient digital entrepreneurship based on their years of experience.

Discussion

The findings of the study show that all the AI tools to teach learners are highly needed for effective and efficient digital entrepreneurship. The finding agrees with Crescenzi-Lanna (2023) and Amesi and Peterside (2024) who argued that AI in businesses and schools offer multiple possibilities for business owners, school teachers, administrators and students. One example is

ChatGPT, the latest version, GPT-4, which is usually integrated into software such as Microsoft Office, Edge, and Bing for optimizing educational tasks. The findings of the study as well show that all AI tools to teach learners will lead to effective and efficient digital entrepreneurship. Finding of the study harmonises with the views of Nwadiuto (2024) who argued that artificial intelligence when properly used will lead to effective and efficient digital skills for the global workplace. The fact that all the lecturers indicated that AI tools to teach learners are very highly needed and will lead to effective and efficient digital entrepreneurship is a serious call that they should be urgently included in the entrepreneurship curriculum, and lecturers should do internal inclusion during teaching and learning while waiting for national curriculum review to enable learners acquire the skills to reduce the high rate of unemployment.

Findings of the study further show that male and female lecturers do not differ in their mean rating on how the AI tools to teach learners will lead to effective and efficient digital entrepreneurship based on their years of experience. This finding corresponds with the report of Ezenwafor and Ukata (2022a) who postulated that how well lecturers explore AI tools in improving the teaching of AI related courses depend on their level of educational qualification, training and retraining. Additionally, finding of the study indicates that male and female lecturers do not differ in their mean rating on how the AI tools to teach learners will lead to effective and efficient digital entrepreneurship based on their years of experience. The finding concurs too with the opinions of Ukata and Okeke (2023), Ezenwafor and Ukata (2022b), and Ukata and Nmihelle (2022) who claimed that teaching experience and age are among the factors that influence lecturers' knowledge and skills on exploring the power of AI tools with related teaching experience because, younger lecturers are more likely to possess them than older ones. The fact that all the lecturers indicated that teaching experience and age are factors that influence AI tools shows that younger lecturers with the best academic qualifications and experience should be employed to teach entrepreneurship education courses with related digital entrepreneurship.

Conclusion

Based on the findings that emanated from the discussions of the study, it was concluded that if the various learners are taught all the AI tools, it will lead to effective and efficient digital entrepreneurship skills development in entrepreneurship education, transform the programme positively, leading to AI skills development and enable the learners to acquire the needed employability skills for the global workplace. Additionally, it was concluded that educational attainment and years of teaching experience played vital roles in exploring the power of AI tools for effective and efficient digital entrepreneurship skills development for employability and possible jobs creation. It was also concluded that because the needed AI employability skills will be acquired by learners if included and taught to learners properly, it will assist drastically to reduce the high rate of unemployment among graduates in Rivers State in particular and Nigeria in general. Finally, it was concluded that it will be very difficult to teach learners AI tools for effective and efficient digital entrepreneurship skills development without great experience, standard academic qualification and youthful energy to deliver the lectures.

Recommendations

Based on the findings and conclusion of the study, the following recommendations were made:

1. AI tools should be included during the teaching of entrepreneurship courses through yearly internal curriculum review by lecturers in collaboration with the authorities of their various institutions. Federal, state and local governments should provide enough funding for the procurement of AI equipment (Smart assistants (e.g. Apple's Siri, Google Now, Amazon's Alexa, and Microsoft's Cortana and Automated financial investing Healthcare management) to enable lecturers and students access them for better teaching and learning experience. Heads of institutions running business education programmes should fund the procurement of AI's facilities via internally generated revenue.
2. Since whatever knowledge one acquires remains with the person, the entrepreneurship lecturers should make personal sacrifices from their earnings and engage in AI tools and training through online and offline short courses to effectively teach digital entrepreneurship as well as sustain and remain relevant in their areas of operations. Tertiary institutions running business education should send lecturers on AI tools specialized training to gain the needed skills since the training may be expensive for lecturers to bear.
3. Since the level of educational attainment and years of experience play vital roles in identifying the types of AI tools to be explored with benefits for effective and efficient digital entrepreneurship skills development, younger entrepreneurship educators with the required academic qualifications and years of experiences should be employed by institutions running the programme. These will assist in the implementation of AI tools and transferring the same to learners to acquire the needed employability skills.

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