

TRAINING AND RETRAINING OF BUSINESS EDUCATION STUDENTS FOR SKILLS ACQUISITION IN ARTIFICIAL INTELLIGENCE FOR JOB PERFORMANCE IN EKITI STATE, NIGERIA

Utoware, Jude Daniel AmakainoPhD

Dept. of Educational Management and Business Studies

Federal University Oye-Ekiti

Jude.utoware@fuoye.edu.ng

TEL +2348062798999

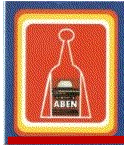
Abstract

The study examined the training and retraining of business education students for skills acquisition in Artificial Intelligence for job performance in Ekiti State. Three research questions were answered while three null hypotheses were tested by the study at 0.05 level of significance. The design that was adopted for the study was a descriptive survey design. The population for the study comprised all the 10 Business Education lecturers in FUOYE and 52 Business studies teachers in public secondary schools in Oye-Ekiti, Ekiti State, totalling 62 respondents. The sample drawn comprised the 62 respondents using the total enumeration technique of census sampling. The instrument used was a self-structured questionnaire titled Training and Retraining of Business Education Students for Artificial Intelligence Knowledge (TRBESAI). It was face and content validated by three experts in the field of Business Education and Measurement and Evaluation. The reliability of the instrument using Cronbach alpha statistics yielded average reliability coefficients of 0.86. Sixty-two copies of the questionnaire were administered to the respondents and all were duly returned representing a 100% return rate and subjected to relevant statistical analyses. The results of the study identified 10 types of skills in Artificial Intelligence, 5 ways through which the training and retraining of business education students yield to the acquisition of Artificial Intelligence for quality job performance and 5 ways through which the acquisition of skills in Artificial Intelligence influence the job performance of business education students. Results of the hypotheses showed that there is no significant ($p < 0.05$) difference between the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on the types of skills in Artificial Intelligence to be acquired by Business Education students and how the acquisition of skills in Artificial Intelligence influences the job performance of business education students. On the other hand, there is significant ($p < 0.05$) difference between the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on whether training and retraining of business education students yield to the acquisition of Artificial Intelligence for quality job performance. It was recommended among others, that, Artificial Intelligence (AI) should be more extensively integrated into higher education curricula, and that institutions need to consider the ethical implications of AI in the development and implementation of their programmes.

Keywords: Artificial Intelligence, skills, Acquisition, Job, Performance, Training, Retraining

Introduction

Acquisition of skills in artificial intelligence is presently a necessity for all students across the disciplines as the demand for computer usage in every facet of life has continued to rise by the day. Training and retraining of business education students in the acquisition of artificial intelligence have become an inevitable phenomenon as its integration is now seen as a



requirement for job security, job performance and effective actualization of any organizational goals.

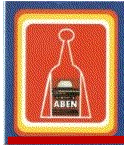
Acquisition of skills in artificial intelligence has become necessary considering the human functions it performs to relieve humans from the rigours of stress. Artificial intelligence (AI) is known to be the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision which would have stressed humans too. AI is complementary to human effort as scientists see it as the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. This logical statement indicated that for any organization to thrive well in the actualization of its objectives, the place of AI must not be undermined which means for an individual to be eligible for job and quality job performance in any organization, he or she must be knowledgeable in AI. This statement calls for the inevitable integration of AI courses in Business Education for its acquisition by students to brighten their chances of employment in any organization after graduation.

Some researchers have pointed out the types of AI skills required by business education students for effective job performance. For instance, Udie and Nwosu (2023) verified the skills required of Business Education graduates for effective job performance in modern offices in Cross River State and showed that Information and Communication Technology (ICT), and communication skills are required of Business Education graduates for effective job performance in modern offices in Cross River State. Edet et al (2020) determined the skills needed by business education lecturers and the findings are that technology-driven teaching skills significantly predict the effective delivery of the content of business education. Zilu et al (2024) examined an evaluation of the impact of AI on university students' learning and highlighted the sound selection of evaluation criteria in the context of AI educational applications.

Continuing with the types of AI skills required by business education students for effective job performance, Das et al. (2015) mentioned the AI skills to be acquired by business education students for effective job performance to be computer vision, prediction systems, data mining intelligent learning or teaching systems, learning analytics. Al-Zyoud (2020); Han, Park and Lee (2022); and Ley et al. (2023) list them as facial recognition systems, voice or speech recognition systems, virtual laboratories, augmented reality, virtual reality, hearing and sensing technologies, edge computing, virtual personalised assistants, real-time analysis, Artificial Intelligence chatbot, image recognition, personalised learning approach, academic analytics, and adaptive learning method. Acquisition of these AI skills is yet to be known whether they influence the job performance of business education graduates in Ekiti state, Nigeria.

Job performance is defined as an aggregate of employee behaviours that have some expected value to organizations (positive or negative) (Gülduran&Perçin, 2020). Job performance is defined as the total expected value to the organization. It has been asserted that AI boosts employee job performance in an organization and this high level of employee performance enables companies to reach their goals easily. The integration of AI in an organization according to Çakır and Gözoğlu (2019) is a necessity for a healthy execution of organizational functioning. Some researchers such as Yıldız et al.2014; Ay & Keleş, 2017 have noted that the effective and productive working of the employees within the company depends largely on their level of skills in artificial intelligence. No wonder, many organizations these days embark on a series of retreats in the form of training and retraining of their employees for effectiveness and more output to meet up the global demands.

It is an evolution from the above managerial strategies for boosting effectiveness that there are series of training and retraining programmes in most organizations these days to keep



the trend in their productive purpose. Training is the process of modifying the knowledge, attitude and skill of a person through learning for enhanced performance. Training in organisations is intended to change the attitude, knowledge and skills of employees at work to enable them to perform their assigned duties creditably (Nkomo & Abdi 2023). Retraining is the process of learning a new skill or trade, often in response to a change in the work environment. It is also the process of learning a new skill or trade, often in response to a change in the work environment. Generally, it reflects changes within a profession rather than an "upward" movement in the same field. Retraining is seen as a process of updating one's talents and skills to keep up with workplace development (Akaba and Osamuyi, 2022). Retraining in Business Education is nothing but learning a new skill or a new job within your department. Retraining, as the name implies, entails training an employee once again. An employee retraining program serves in re-acquainting an employee with previously learnt skills, recalling and retaining certain potentials and staying updated on the latest skill requirements. Some retraining programs are required to be carried out regularly to avoid employee obsolescence because of technological changes or an individual's knowledge-grasping power.

Research evidence has shown that training and retraining of employees in artificial intelligence influence their job performance. For instance, Agber (2021) investigated training and retraining as precursors' performance in secondary schools in Benue State, Nigeria and published that on-the-job training and retraining opportunities and off-the-job training and retraining opportunities have significance. Oguejiofor and Ezenwanne (2020) focused on training and retraining programmes as a strategy for improving the quality of business education lecturers in public tertiary institutions in Anambra State and revealed that training and retraining programme is a strategy for improving the quality of business education lecturers in tertiary institutions in Anambra State. It is yet to be determined whether training and retraining strategies could aid Business Education graduates' job performance in Ekiti State, Nigeria. It is on this premise that the study is set to investigate the training and retraining of Business Education students for skills acquisition in artificial intelligence for job performance in Ekiti State, Nigeria.

Statement of the Problem

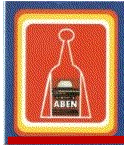
Twentieth (20th) centuries down to the present day have been observed to witness a boost in the performance of jobs by employees across the globe. This welcome development is attributed to the general integration of Artificial Intelligence into the productive aspect of almost all formal organizations. However, it seems to be yet prioritized by the Business Education Department of Nigeria Universities as most of the intake students are not computer compliant acquiring its skills compulsory before graduation.

There are observed complaints from the employers of labour in Nigeria about the poor usage of computers and their related facilities for effective job performance by most business education students. It is doubtful whether this apparent poor knowledge of artificial intelligence by business education students for effective service delivery could be ascribed to the quality of training they received in school or whether it is the students' factor. These discourses among the trainers and employers encourage the researcher to investigate the training and retraining of business education students for skills acquisition in artificial intelligence for job performance in Ekiti State.

Research Questions

The following research questions guided the study:

1. What are the types of skills in Artificial Intelligence to be acquired by business education students for effective job performance?



2. How does training and retraining of business education students yield to the acquisition of Artificial Intelligence for quality job performance?
3. How does the acquisition of skills in Artificial Intelligence influence the job performance of business education students?

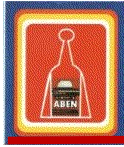
Hypotheses

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

- H0₁:** There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on the types of skills in Artificial Intelligence to be acquired by business education students for effective job performance.
- H0₂:** There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on whether training and retraining of business education students yield to the acquisition of Artificial Intelligence for quality job performance.
- H0₃:** There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on how the acquisition of skills in Artificial Intelligence influences the job performance of business education students.

Research Design

The design that was adopted for the study was a descriptive survey design. This design is often used when a study intends to investigate an ongoing phenomenon. The population for the study comprised all the Business Education lecturers in FUOYE and teachers in public secondary schools in Oye-Ekiti, Ekiti state, Nigeria. According to information from the Personnel Unit of the FUOYE and Ekiti State Teaching Service Board, 2024 show that there are 10 Business Education lecturers in FUOYE and 52 Business Studies teachers across all the public secondary schools in Oye metropolis totalling 62 respondents. The choice of this population is based on their experience as teachers and involvement in teaching the subject which put them in the best position to supply the needed data for the study. The sample drawn for the study comprised 62 participants using the total enumeration technique of census sampling. The choice of this sample is based on the smallness nature of the respondents which is manageable for this kind of study. The instrument that was used for data collection was a self-structured questionnaire titled Training and Retraining of Business Education Students for Artificial Intelligence Knowledge Questionnaire (TRBESAI). The questionnaire had two sections namely; Section A which was used to collect demographic data on the respondents of the study, and Section B which contains 20 items in three clusters. The instrument was responded to on a four-point modified Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with weighted values of 4, 3, 2 and 1 respectively. The weighted values were summed up and divided by 4 to arrive at the criterion mean score of 2.50 which was used for decision-making. The face and content validity of the instrument was determined by the three experts in the field of Business Education and Measurement and Evaluation in the Faculty of Education, Federal University Oye-Ekiti, Ekiti State. The internal consistency of the instrument was determined using Cronbach alpha statistics. There were twenty respondents outside the sample selected for the study but from university and public secondary schools in Ekiti State who were selected for the reliability test. The choice of Ekiti State was made because schools in Ekiti State share the same attributes and as such it will help give a clear picture of what exists in the state. The reliability coefficients of the three clusters of the instrument were 0.87, 0.81 and 0.89. Averagely, the reliability index of the instrument was 0.86. Data for the study were collected personally by the researcher with the help of three trained



research assistants. There were 62 copies of the questionnaire that were administered to the respondents selected for the study and all were duly returned representing a 100% return rate and subject to relevant statistical analyses. The research questions raised were answered using mean and standard deviation scores. The criterion mean score of 2.50 was used for decision-making on each of the questionnaire items. T-test was used to test the hypothesis and the null hypothesis were upheld and rejected at 0.05 level of significance.

Results

Research Question One

What are the types of skills in artificial intelligence to be acquired by business education students for effective job performance?

Table 1: Types of Skills in Artificial Intelligence to be acquired by Business Education Students for Effective Job Performance (n= 62)

SN	Item Statement	$\bar{X}$	SD	Rmks
1.	Facial recognition systems	3.64	0.48	Agreed
2.	Voice or speech recognition systems	3.80	0.39	“
3.	Intelligent learning or teaching systems	3.64	0.48	“
4.	Prediction systems	3.70	0.45	“
5.	Data mining	3.48	0.50	“
6.	Virtual laboratories	3.45	0.59	“
7.	Image recognition	3.59	0.49	“
8.	Artificial Intelligence chatbot	3.40	0.58	“
9.	Virtual personalized assistants	3.66	0.57	“
10.	Hearing and sensing technologies	3.35	0.65	“
Cluster Summary		3.57	0.61	Agreed

Note: $\bar{X}$ = Mean, SD = Standard Deviation, n = Number of respondents, Rmks= Remarks.

The result in Table 1 showed that the mean values of the respondents on the 10 items ranged from 3.35 to 3.80 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the respondents agreed that the identified 10 items in the table are the types of skills in artificial intelligence to be acquired by business education students for effective job performance. The cluster summary mean of 3.57 was considerably high while the standard deviation values of the 10 items ranged from 0.39 to 0.65 indicated that the responses of the respondents are close to the mean and one another.

Research Question Two

How does training and training of business education students yield to the acquisition of artificial intelligence for quality job performance?

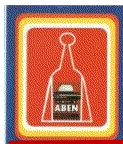


Table 2: How Training and Retraining of Business Education Students Yield to the Acquisition of Artificial Intelligence for Quality Job Performance (n = 62)

SN	Item Statement	$\bar{X}$	SD	Rmks
1.	It makes business education students more effective in the workplace	3.59	0.58	Agreed
2.	It improves their work performance	3.51	0.74	“
3.	It helps business education students become more efficient and effective	3.69	0.46	“
4.	It prepares business education students for higher responsibilities	3.61	0.66	“
5.	It improves their Information Technology and computer skills for quality job performance	3.62	0.57	“
Cluster Summary		3.60	0.52	Agreed

Note: $\bar{X}$ = Mean, **SD** = Standard Deviation, **n** = Number of respondents, **Rmks**= Remarks.

The result in Table 2 revealed that the mean values of the respondents on the 5 items ranged from 3.51 to 3.62 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This implied that the respondents agreed that the identified 5 items in the table are ways through which training and training of business education students yield to the acquisition of artificial intelligence for quality job performance. The cluster summary mean of 3.60 was appreciably high while the standard deviation values of the 5 items ranged from 0.46 to 0.74 signified that the responses of the respondents are close to the mean and one another.

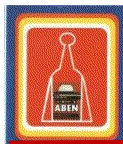
Research Question Three

How does the acquisition of skills in artificial intelligence influence the job performance of business education students?

3: How the Acquisition of Skills in Artificial Intelligence Influence the Job Performance of Business Education Students (n = 62)

S/N	Item Statement	$\bar{X}$	SD	Rmks
1.	Guarantee quality output	3.35	0.79	Agreed
2.	Enhance mass production	3.75	0.43	“
3.	Brings Less fatigue	3.50	0.50	“
4.	Quick actualization of organizational goals	3.54	0.59	“
5.	It increases the competencies of the employees	3.38	0.68	“
Cluster Summary		3.50	0.56	Agreed

Note: $\bar{X}$ = Mean, **SD** = Standard Deviation, **n** = Number of respondents, **Rmks**= Remarks.



From the result in Table 3 above, it was revealed that the mean values of the respondents on the 5 items ranged from 3.35 to 3.75 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicated that the respondents agreed that the identified 5 items in the table are ways through which the acquisition of skills in artificial intelligence influences the job performance of business education students. The cluster summary mean of 3.50 was substantially high while the standard deviation values of the 5 items ranged from 0.43 to 0.79 implied that the responses of the respondents are close to the mean and one another.

Hypotheses

Hypothesis One

H0₁: There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies teachers on the types of skills in artificial intelligence to be acquired by business education students for effective job performance.

Table 4: Test of no Significant Difference in the Mean Ratings of Business Education Lecturers and Teachers on the Types of Skills in Artificial Intelligence to be Acquired by Business Education Students for Effective Job Performance

Variables	N	$\bar{x}$	SD	DF	Std. Error	t- Cal	t- Critical	Level of Sig.	Rmks
Bus. Edu Lecturers	10	3.59	0.50	60	0.040	1.06	1.96	0.05	NS
Bus. Studies Teachers	52	3.51	0.53						

Note: NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 4 above showed that the t-calculated (t-cal) value of 1.06 is less than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 60 degree of freedom. This suggests that there is no significant ($p < 0.05$) difference between the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies teachers on the types of skills in artificial intelligence to be acquired by business education students for effective job performance. Hence, the null hypothesis of no significant ($p < 0.05$) difference in the mean ratings of the responses of the lecturers and teachers was accepted on hypothesis one.

Hypothesis Two

H0₂: There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies teachers on whether training and retraining of business education students yield to the acquisition of artificial intelligence for quality job performance.

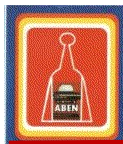


Table 5: Test of no Significant Difference in the Mean ratings of Business Education Lecturers and Teachers on Whether Training and Retraining of Business Education Students Yield to the Acquisition of Artificial Intelligence for Quality Job Performance

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-Cal	t-Critical	Level of Sig.	Rmks
Bus. Edu Lecturers	10	3.70	0.68	60	0.060	2.09	1.96	0.05	S*
Bus. Studies Teachers	52	3.58	0.52						

Note: S* = Significant at 0.05.

From the data presented on the t-test statistics in Table 5, it was revealed that the t-calculated (t-cal) value of 2.09 is greater than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 60 degree of freedom. This indicates that there is significant ($p < 0.05$) difference between the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies Teachers on whether training and training of business education students yield to the acquisition of artificial intelligence for quality job performance. Therefore, the null hypothesis of no significant ($p < 0.05$) difference in the mean ratings of the responses of the lecturers and teachers was rejected on hypothesis two.

Hypothesis Three

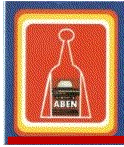
H0₃: There is no significant difference in the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies teachers on how the acquisition of skills in artificial intelligence influences the job performance of business education students.

Table 6: Test of no Significant Difference in the Mean Ratings of Business Education lecturers and Teachers on how the Acquisition of Skills in Artificial Intelligence Influences the Job Performance of Business Education Students

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-Cal	t-Critical	Level of Sig.	Rmks
Bus. Edu Lecturers	10	3.53	0.49	60	0.120	1.24	1.96	0.05	NS
Bus. Studies Teachers	52	3.38	0.55						

Note: NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 6 above showed that the t-calculated (t-cal) value of 1.24 is less than the t-table (t-tab) value of 1.96 at 0.05 level of significance and 60 degree of freedom. This implies that there is no significant ($p < 0.05$) difference between the mean ratings of the responses of Business Education Lecturers in FUOYE and Business Studies



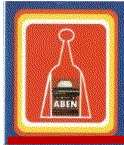
teachers on how the acquisition of skills in artificial intelligence influences the job performance of business education students. Consequently, the null hypothesis of no significant ($p < 0.05$) difference in the mean ratings of the responses of the lecturers and teachers was accepted on hypothesis three.

Discussion of Findings

The findings of this study on research question one identified 10 types of skills in artificial intelligence to be acquired by Business education students to include: facial recognition systems, voice or speech recognition systems, intelligent learning or teaching systems, prediction systems, data mining, virtual laboratories, image recognition, artificial intelligence chatbot, virtual personalized assistants and hearing and sensing technologies. This finding agreed with that of Ley et al., (2023) who found that the types of artificial intelligence skills include intelligent learning or teaching systems, learning analytics, facial recognition systems, voice or speech recognition systems, virtual laboratories, augmented reality, virtual reality, hearing and sensing technologies, edge computing, virtual personalised assistants and real-time analysis. The findings of this study equally corroborated that of Al-Zyoud (2020) and Han, Park and Lee (2022) that skills in artificial intelligence to be acquired for work in modern day society include: artificial Intelligence chatbot, image recognition, personalised learning approach, academic analytics, and adaptive learning method. Ouyang and Jiao (2021) identified three Artificial Intelligence in Education paradigms: "AI-direct, learner-as-recipient", where AI leads learning with a defined pathway for the learner, "AI-supported, learner-as-collaborator", where AI optimises interaction among learners, information, and technology, and "AI-empowered, learner-as-leader", where AI enhances learners' intelligence through a complex system.

The findings of this study on research question two identified 5 ways through which the training and training of business education students yield to the acquisition of artificial intelligence for quality job performance which include that: it makes business education students more effective in the workplace, improve their work performance, helps business education students become more efficient and effective, prepares business education students for higher responsibilities and improves their Information Technology and computer skills for quality job performance. In agreement with the findings of this study, Akaba and Osamuyi (2022) reported that the training according to is the development of specific skills and attitudes needed to perform a particular job or series of jobs to maximize the productivity of the individual and improve the overall organizational efficiency. Re-training on the other hand, according to Morandini, Fraboni, De Angelis, Puzzo, Giusino, and Pietrantonio, L. (2023), is an on-the-job training used by institutions to bring about development and improved competency in the teachers. This is essential especially with the frequent policy changes in education and also in the evolving new knowledge and technology-based society. Retraining business education lecturers can help to reduce mistakes and improve quality and innovations in the teaching profession.

The findings of this study on in respect to research question three identified 5 ways through which the acquisition of skills in artificial intelligence influence the job performance of business education students which include that: it guarantees quality output, enhances mass production, brings less fatigue, quick actualization of organizational goals and it increase the competencies of the employees. In conformity with the findings of this study, Zhang and Aslan (2021) found that Artificial Intelligence systems in education significantly enhance learners' involvement and job performance. Chiu et al. (2023) identified essential AI roles for learners: competency-based task assignments, learner-machine discussions, feedback, and adaptive digital environments. Zhang and Aslan (2021) added other AI facilitations, including engagement, enriched learning resources, and intellectual stimuli. Southworth et al. (2023)



highlight Artificial Intelligence Education's benefits, fostering technical skills, creativity, critical thinking, and problem-solving abilities for students. Hopcan, et al., (2022), artificial Intelligence Education personalises learning experiences and communication to cater to individual needs and abilities, enhancing efficiency (). Customised learning materials are tailored based on students' evaluations, addressing their strengths and weaknesses (Hopcan et al., 2022). Li and Wang (2023) propose using advanced technology to create a comfortable communication environment, fostering learner networks with increased information accessibility for future generations.

Agber (2021) investigated training and retraining as precursors to teachers' performance in secondary schools in Benue State, Nigeria and found that on-the-job training and retraining opportunities and off-the job training and retraining opportunities have significance. The study concluded that on-the-job training and retraining opportunities and off-the-job training and retraining opportunities have significant impact on teacher's job performance. Similarly, Zouhaier (2023) analyses the influence of AI on higher education, investigate its impact on the teaching and learning process, examine its effect on assessment and grading, and predict its influence on graduates' future careers and the results of this study demonstrate the crucial role of AI in the future of higher education. The findings highlight the effectiveness and efficiency of AI in equipping graduates with new skills for their future careers. They also emphasised the importance of considering the ethical implications of AI. The study reveals that higher education institutions needed to integrate AI more extensively in their programs to prepare graduates for the future workforce.

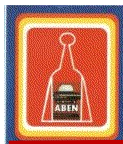
Conclusion

Acquisition of skills in artificial intelligence has become necessary considering the human functions it performs to relieve humans from the rigours of stress. This is because, Artificial Intelligence is complementary to human effort as scientists see it as the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. Recognizing the significance of artificial Intelligence skills in modern day work place, this study examined the training and retraining of business education students for skills acquisition in artificial intelligence for job performance in Ekiti State. Hence, the study identified 10 types of skills in artificial intelligence, 5 ways through which the training and training of business education students yield to the acquisition of artificial intelligence for quality job performance and 5 ways through which the acquisition of skills in artificial intelligence influence the job performance of business education students. The study therefore concluded that adoption of the identified 10 artificial intelligence skills for training and retraining of Business Education students will significantly increase their job performance in Ekiti State, Nigeria and the world at large.

Recommendations

From the data collected and analysed, the study recommended that:

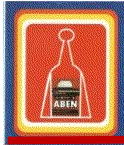
1. Artificial Intelligence (AI) should be extensively integrated into higher education curricula, and that institutions need to consider the ethical implications of AI in the development and implementation of their programmes.
2. The necessary instructional facilities to make teaching and learning of artificial intelligence through artificial intelligence should be adequately provided by the government and other relevant stakeholders in education management. This will help create conducive learning environment in acquisition of Artificial Intelligence skills.
3. Effort should be made by the school management and government agencies and parastatals to ensure periodic and continuous training and retaining of teachers, lecturers



and instructors in Artificial Intelligence skills through workshops, and conferences among others.

References

- Agber, I J (2021). Training and retraining of teachers as a precursor to academic staff performance in secondary schools in Benue state. *Benue State University Journal of Educational Management*. 3(1).
- Akaba, j. & Osamuyi, A. B. (2022). The impact of training and retraining in improving manpower development among local government employees of Oredo local government council, Edo State. *Sapientia Global Journal of Arts, Humanities and Development Studies (SGOJAHDS)*, 5(3), 23 – 34.
- Al-Zyoud, H.M.M. (2020). The Role of Artificial Intelligence in Teacher Professional Development. *Universal Journal of Educational Research*, [e-journal] 8(11B), pp. 6263-6272.
- Ay, F. A., & Keleş, K. (2017). The Effect of Transactional and Transformational Leadership Styles on Intention to Leave and Job Performance. *Gumushane University Journal of Health Sciences*, 6(4), 193-203.
- Çakır, A., & Gözoğlu, Ö. F. (2019). The Effect of Perceived Institutional Reputation on Job Performance and Intention to Leave: A Study on Hospitality Businesses in Şanlıurfa. *Harran Üniversitesi İİBF Dergisi*, 3(4), 46-71.
- Chiu, T., Xia, Q., Zhou, X., Chai, C.S. and Cheng, M., (2023). Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education. *Computers and Education: Artificial Intelligence*, [e-journal] 4, article no. 100118. <https://doi.org/10.1016/j.caeai.2022.100118>.
- Das, S., Dey, A., Pal, A. and Roy, N., (2015). Applications of artificial intelligence in machine learning: review and prospect. *International Journal of Computer Applications*, [e-journal] 115(9), pp. 31-41. <https://doi.org/10.5120/20182-2402>.
- Edet, E., Okon, C., & Chukwurah, C. (2020). Technology-driven teaching skills' need of business education lecturers and content delivery in a globalised economy. *Journal of Education and Learning (EduLearn)*. 14(3), 393~401.
- Güldüran, Ç. A., & Perçin, N. Ş. (2020). The Effect of Big Five Personality Traits on Cyberloafing Behaviour and Job Performance: A Study in Hotel Businesses. *Duzce University Journal of Social Sciences Institute*, 10(1), 37-56.
- Han, J. W., Park, J. and Lee, H., (2022).. Analysis of the effect of an artificial intelligence chatbot educational program on non-face-to-face classes: a quasi-experimental study. *BMC Medical Education*, [e-journal] 22, article no. 830, pp. 1-10.
- Hopcan, S., Polat, E., Ozturk, M.E. and Ozturk, L., (2022). Artificial intelligence in special education: a systematic review. *Interactive Learning Environments*, [e-journal]. <https://doi.org/10.1080/10494820.2022.2067186>.
- Ley, T., Tammets, K., Pishtari, G., Chejara, P., Kasepalu, R., Khalil, M., Saar, M., Tuvi, I., Väljataga, T. and Wasson, B., (2023). Towards a partnership of teachers and intelligent learning technology: A systematic literature review of model-based learning analytics. *Journal of Computer Assisted Learning*, [e-journal] pp. 1397-1417.
- Morandini, S., Fraboni, F., De Angelis, M., Puzzo, G., Giusino, D., & Pietrantoni, L. (2023). The impact of artificial intelligence on workers' skills: Upskilling and reskilling in organisations. *Informing Science: The International Journal of an Emerging Transdiscipline*, 26, 39-68. <https://doi.org/10.28945/5078>



- Nkomo, N. N., & Abdi, M. U. (2023). Impacts of Training and Retraining Teachers in Primary and Post Primary Schools for Better Performance. *International Research Journal of Educational Research*, 14(3), 1-6.
- Oguejiofor, C. S., & Ezenwanne, . C. R. (2020). Training and retraining programme as a strategy for improving the quality of business education lecturers in public tertiary institutions in anambra state *Global Journal of Education, Humanities and Management Sciences (GOJEHMS)*; 2(1), 144 – 153.
- Ouyang, F. and Jiao, P., (2021). Artificial intelligence in education: The three paradigms. *Computers and Education: Artificial Intelligence*, [e-journal] 2, article no. 100020, pp. 1-6.
- Southworth, J., Migliaccio, K., Glover, J., Glover, J., Reed, D., McCarty, C., Brendemuhl, J. and Thomas, A., (2023). Developing a model for AI Across the curriculum: Transforming the higher education landscape via innovation in AI literacy. *Computers and Education: Artificial Intelligence*, [e-journal] 4, article no. 100127, pp. 1-10.
- Udie, M. U. & Nwosu, O. B. (2023). Skills Required Of Business Education Graduates For Effective Job Performance In Modern Offices In Cross River State. *International Journal of Innovative Education Research* 11(2):183-192.
- Yıldız, S., Savcı, G., & Kapu, H. (2014). The Effect of Motivational Factors on Employees' Job Performance and Intention to Leave. *Celal Bayar Üniversitesi İ.İ.B.F Yönetimve Ekonomi Dergisi*, 21(1). <https://doi.org/10.18657/yecbu.75006>
- Zhang, K. and Aslan, A.B., (2021). AI technologies for education: Recent research and future directions. *Computers and Education: Artificial Intelligence*, 2, article no. 100025, pp. 1-11.
- Zilu, W., Enhui, B., & Min, L. (2024). An Evaluation of the Impact of Artificial Intelligence on university Students' Learning. *Journal of Innovation and Development*, 6(2), 22-25.
- Zouhaier, S. (2023). The Impact of Artificial Intelligence on Higher Education: An Empirical Study. *European Journal of Educational Sciences*, March 2023 edition, 10(1), 17-33.