

ARTIFICIAL INTELLIGENCE SKILLS REQUIRED OF BUSINESS EDUCATION STUDENTS FOR JOB PERFORMANCE IN THE NEW ERA

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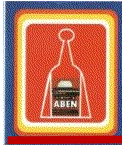
Abstract

The paper sought to determine artificial intelligence skills required of business education students for job performance in the new era. Two research questions and two null hypotheses guided the study. The study adopted a descriptive survey research design. Area of the study was in Rivers state. The population of the study comprised 36,427 of senior civil servants from 26 ministries. The sample size was 380. A structured questionnaire was used. The instrument was validated by three experts, two in Business Education and one in Measurement and Evaluation. Reliability of the research instrument was obtained using Pearson's Product Moment Correlation Coefficient. The overall reliability index for the instrument was .78. 380 copies of the instrument were administered to the respondents but 364 were retrieved representing 96% of the instrument. The data collection was analysed using Mean and Standard deviation for the research questions while the hypotheses were tested at .05 level of significance using t-test. The findings of the study shows that the senior civil servants in organisations were of the opinion that AI accounting and AI electronic office skills were highly required of Business Education Students. Based on the findings, it was concluded that AI accounting and AI electronic office skills were very highly required of Business Education students for job performance in organisations in a digital era. The researchers also recommended that Business education students should equip themselves with AI accounting and AI electronic office skills to make them relevance in the world of work in the new era.

Keywords: Artificial intelligence, Business education, Skills, and Job Performance

Introduction

Artificial intelligence (AI) is revolutionizing the business landscape, necessitating a review of the skills required for job performance in organizations. Business education students are required to develop artificial intelligence related skills to remain competitive in the job market. Traditionally, Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. (Kurzweil, 2005) in the modern perspective, Russell and Norvig (2010) sees AI as a multidisciplinary field that combines computer science, mathematics, and engineering to create intelligent machines that can perform tasks that typically



require human intelligence. Is a tool that can be used to augment human capabilities, automate tasks, and improve decision-making.

Business education refers to the academic discipline that focuses on the study of business and commerce. It encompasses various aspects of business which includes accounting, business administration, management, electronic office, marketing, finance, entrepreneurship, human resources, international business, supply chain management, and business ethics (Okoli, 2013). Abdulkadir (2011) added that the goals of business education are preparing students for careers in business and management, developing entrepreneurial skills and mindset, providing knowledge and skills for effective leadership and management, fostering critical thinking, problem-solving, and decision-making abilities, encouraging ethical and socially responsible business practices.

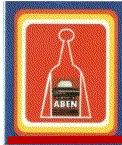
According to Manyika *et al.*, (2017) AI is transforming business operations, driving demand for AI-related skills. Business education programs for students need to develop skills in areas like data analysis and interpretation, machine learning and programming, critical thinking, problem-solving, emotional intelligence, and communication (Baker, 2020; Goleman, 2019; World Economic Forum, 2020). Integrating technology and experiential learning into business education can enhance student engagement and learning outcomes (Graham, 2018).

Accounting remains one of the important skills in business education which learners perform basic bookkeeping and accounting function. They are regarded as entry level workers in accounting profession. Accounting skills are indispensable for business decision-making and financial management (Weygandt *et al.*, 2018). Research highlights the importance of accounting education in developing skills like financial analysis, budgeting, and financial reporting (Arens *et al.*, 2017).

Electronic office skills refer to the proficiency in using digital tools and software to perform various tasks and functions in an office setting. Electronic office skills are crucial in today's digital work environment, enhancing productivity and efficiency (Katz, 2017). Proficiency in software applications like Microsoft Office and Google Suite is essential for effective communication, collaboration, and data management (Latham, 2019). Onojaife (2006) state that office systems have moved from typewriters, handwriting and manual operational procedures to artificial intelligence. AI digital powered machine have reduced the long hours of office business to a mere pressing of buttons to attain a more effective and efficient output such as time management, report generation, virtual assistant.

Job performance in the new era is mostly showcase in organisations. Organisation according to Jones and George cited in Oduma and Ile (2012) is seen as an institution, an industry or business, the civil service, department or government ministry, church, social club, or even non-governmental organizations (NGOs). Organisational skills deal with existence organised methodical and capable to blueprint work to come across target, deadlines and observe improvement of work. Job performance in organisations is the train or the machine that drives productivity which other elements like motivation and skill grease the engine. Job performance is influenced by factors like employee motivation, job satisfaction, and organizational support (Luthans, 2005). Research emphasizes the importance of continuous learning and skill development in enhancing job performance and career advancement (London, 2017). Job performance is relevant that it cannot be ignored in the industrial background.

The new era of business education students comprises changing skill sets, digital native, diversity and inclusion, experiential learning, entrepreneurship programmes, sustainability and social responsibility (Bishop, 2019; Dugan *et al.*, 2018; Bae *et al.*, 2017; Porter & Kramer, 2019). Business education students are required to focus on developing artificial intelligence skills.



Business education students lack AI-related skills, hindering their job performance in organizations and organizations struggle to find graduates with the necessary AI skills to drive business growth. There is also a disconnect between business education curricula and industry demands for AI skills.

Empirical studies on AI skills required of business education students for job performance in organizations are essential to understand the evolving needs of the industry. One study determined that accounting and problem-solving skills are highly required of business education students for job performance in organisations (Nwaokokorom&Ikpeama, 2023). Another systematic review examined AI in higher education and found that AI is being used for assessment, prediction, AI assistant, intelligent tutoring system, and managing student learning. While there is no specific study on AI skills required of business education students for job performance, these studies indicate that business education students should equip themselves with skills like accounting, electronic office, communication, entrepreneurial, problem-solving, and AI to be relevant in the job market.

The purpose of this study was to determine artificial intelligence skills required of business education students for job performance in the new era. Specifically, objective of the study determined:

1. AI accounting skills required of Business Education students for job performance in the new era.
2. AI electronic office skills required of Business Education students for job performance in the new era.

The following research questions were formulated to guide the study:

1. What are the AI accounting skills required of Business Education students for job performance in the new era?
2. What are the AI electronic office skills required of Business Education students for job performance in the new era?

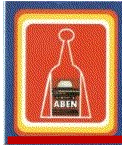
The following null hypotheses were formulated and tested at .05 level of significance:

Ho₁: There is no significant difference in the mean ratings of male and female senior civil servants on the AI accounting skills required of Business Education students for job performance in the new era.

Ho₂: There is no significant difference between the mean ratings of male and female senior civil servants on the AI electronic office skills required of Business Education students for job performance in the new era.

Methodology

The researcher adopted a descriptive survey research design. Area of the study was Rivers state. Population of the study comprised 36,427 of senior civil servants from 26 ministries. The sample size was 380, utilising Krejcie and Morgan formula (Nwaokokorom&Ikpeama, 2023).. The instrument used for data collection was a structured questionnaire designed to elicit response based on the research questions set for the study. The instrument was validated by three experts, two in Business Education and one in Measurement and Evaluation. Reliability of the research instrument was obtained using Pearson's Product Moment Correlation Coefficient. The overall reliability index for the instrument was .78. The data collection was analysed by using Mean with Standard deviation for the research questions and t-test for the hypotheses at .05 level of significance. The decision rule for answering the research questions was based on real limit of



numbers, thus: Very Highly Required at 4 points (3.50 - 4.00), Highly Required at 3 points (2.50 - 3.49), Lowly Required at 2 points (1.50 - 2.45), and Very Lowly Required at 1 point (1.00 - 1.49).

Results

Research Question 1

What are the AI accounting skills required of Business Education students for job in the new era?

Table 1: Responses of Senior Civil Servants on AI accounting skills required of Business Education students for job performance in the new era

S/N	ITEM DESCRIPTION	$\bar{X}$	SD	REMARK
Custer 1: AI Accounting skills.Ability to use AI to;				
1	analyse data	3.72	0.46	VHR
2	interpret large dataset	3.44	0.62	HR
3	analyse financial statement	3.52	0.50	VHR
4	manage automated accounting system	3.49	0.53	HR
5	implement accounting system	3.75	0.44	VHR
6	understand accounting software	3.72	0.46	VHR
7	collect data	3.60	0.49	VHR
8	identify trends	3.58	0.49	VHR
9	predict future financial performance	3.63	0.63	VHR
10	understand auditing tools	3.50	0.70	VHR
11	identify potential auditing risks	3.48	0.66	HR
12	analyse tax laws	3.61	0.67	VHR
13	regulate tax savings opportunities	3.60	0.64	VHR
14	optimize tax strategies	3.66	0.48	VHR
15	forecast future financial performance	3.63	0.51	VHR
16	develop mitigation strategies	3.64	0.62	VHR
17	ensure compliance with accounting standards	3.58	0.58	VHR
18	improve accounting efficiency and effectiveness	3.64	0.50	VHR
19	improve accounting communication	3.69	0.49	VHR
20	apply machine learning to accounting problems	3.43	0.62	HR
Custer Mean		3.59	0.16	VHR

$\bar{X}$ = Mean, SD = Standard Deviation, N= 364

Source: Field Survey, 2024

The data presented in Table 1 indicates that, the Senior Civil Servants responses have cluster mean of 3.59, and standard deviation of 0.16. This means that, the senior civil servants are homogenous in their responses, and they are in agreement that 16 items are Very Highly Required (VHR) AI accounting skills required of business Education students for job performance in the new era organisations. While 3 items are Highly Required (HR). Therefore, according to the Senior Civil Servants all items in Table 1 are AI accounting skills required of business Education students for job performance in the new era organizations.

Null Hypothesis 1

There is no significant difference between the mean ratings of male and female senior civil servants on the AI accounting skills required of business Education students for job performance in the new era.

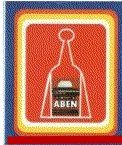


Table 2: The t-test result of the mean responses of Male and Female Senior Civil Servants on AI accounting skills required of business Education students for job performance in the new era.

Gender	N	$\bar{X}$	SD	Df	t-cal	t-crit	Decision
Males	213	3.59	0.16	362	0.59	1.96	Not significant
Females	151	3.58	0.16				

The result in Table 2 shows that t-cal is 0.59 and t-crit is 1.96 at .05 significant level. This indicates that t-cal (0.59) is less than t-crit (1.96). As a result, the stated null hypothesis that, there is no significant difference between the mean ratings of Male and Female senior civil servants regarding the AI accounting skills required of Business Education students for job performance in the new era organisations is not rejected.

Research Question 2

What are the AI electronic office skills required of Business Education students for job performance in the new era?

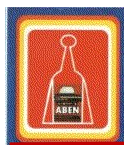
Table 3: Responses of Senior Civil Servants on AI electronic office skills required of Business Education students for job performance in the new era?

S/N	ITEM DESCRIPTION	$\bar{X}$	SD	REMARK
Cluster 2: AI Electronic Office skills. Ability to use AI to;				
21	automate meeting scheduling	3.59	0.68	VHR
22	automate report generation	3.42	0.33	HR
23	automate data entry and processing	3.74	0.45	VHR
24	virtual assistants	3.67	0.49	VHR
25	intelligent document management	3.73	0.48	VHR
26	chatbots for customer support and services	3.57	0.47	VHR
27	use google assistant to schedules	3.74	0.44	VHR
28	design and presentation tools	3.78	0.42	VHR
29	digital calendar organisation	3.54	0.62	VHR
30	predict text and language processing	3.81	0.40	VHR
31	email management	3.82	0.48	VHR
32	time management	3.73	0.53	VHR
33	bookkeeping and accounting	3.78	0.42	VHR
34	Intelligent customer relationship management	3.85	0.36	VHR
35	Intelligent task management	3.83	0.38	VHR
Cluster Mean		3.71	0.19	VHR

$\bar{X}$ = Mean, SD = Standard Deviation, N = 364

Source: Field Survey, 2024

The data presented in Table 3 shows that, the Senior Civil Servants responses have a cluster mean of 3.71, and standard deviation of 0.19. This implies that, the Senior Civil Servants are unanimous in their responses, and they agree that 14 items are Very Highly Required (VHR) AI electronic office skills required of Business Education students for job performance in organizations in the new era. While 1 is Highly Required (HR). Therefore, according to the Senior Civil Servants all items in Table 3 are AI electronic office required of Business Education students for job performance in the new era organizations.



Null Hypothesis 2

There is no significant difference between the mean ratings of male and female senior civil servants on the AI electronic office skills required of Business Education students for job performance in the new era.

Table 3: The t-test result of the mean responses of Male and Female Senior Civil Servants on AI electronic office skills required of Business Education students for job performance in the new era.

Gender	N	$\bar{X}$	SD	Df	t-cal	t-crit	Decision
Males	213	3.70	0.18	362	0.51	1.96	Not significant
Females	151	3.71	0.19				

The result in Table 3 shows that t-cal is 0.51 and t-crit is 1.96 at .05 significant level. This indicates that, t-cal (0.51) is less than t-crit (1.96). As a result, the stated null hypothesis that, there is no significant difference between the mean ratings of male and female senior civil servants regarding the AI electronic office skills required of Business Education students for job performance in the new era organisations is not rejected.

Discussion of the Findings

Respondents from 26 ministries agreed to the very highly required that AI accounting skills are required of Business Education students for job performance in the new era organisations. This finding is in line with that of Nwaokokorom and Ikpeama, (2023) that AI accounting and problem-solving skills are highly required of business education students for job performance in organizations. The knowledge skills will enable the students to hold the understanding of business management while the technical skills will enable them to run the day-to-day activity of this enterprise.

Another finding revealed that AI electronic office skills are very highly required of business education students for job performance in the new era organisations. This is in line with This finding agreed with the result obtained from Onojaife (2006) that office systems have moved from typewriters, handwriting and manual operational procedures to artificial intelligence of most offices where such terms as word processing, data processing and micrographics are used to describe many technological processes. Katz (2017) also stated that electronic office skills are crucial in today's digital work environment, enhancing productivity and efficiency. With AI electronic skills in organisation the system will progress efficiently.

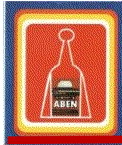
Conclusion

Based on the findings of this study, the researchers concluded that AI accounting skills and AI electronic office skills are very highly required of Business Education students for job performance in organisations in the new era.. It was also concluded that there is no significant difference in mean ratings of male and female senior civil servants regarding the AI accounting and AI electronic office skills required of Business Education students for job performance in organisations in the new era.

Recommendations

Based on the findings, the following recommendations were made:

1. Business education students should venture to prepare themselves with all the applicable artificial intelligence accounting skills required for them to create and maintain their customers' needs.



2. Business education students should develop themselves with related artificial intelligence electronic office skills.

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