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Influence of Awareness and Preparedness on Artificial Intelligence Technology Adoption in Business Education Programmes

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Abstract

This study examines the influence of awareness and preparedness on the adoption of AI technology in business education programmes. Two research questions and two hypotheses were formulated and tested at 0.05 level of significance. The study adopted a descriptive survey research design, utilizing questionnaires designed and administered to a target population of 266 respondents comprising 201 students and 65 lecturers in universities in North Central Nigeria. A reliability test was also conducted and analyzed using Cronbach Alpha coefficient method on the instrument which yielded an overall reliability coefficient of 0.88. Data collected were analyzed using Mean and Standard Deviation answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The findings revealed that awareness and preparedness significantly influenced the adoption of AIT in Business education programme, emphasizing the importance of knowledge about AIT, their applications, and readiness to integrate them into business education programmes. The results of the hypothesis showed that there was no significant difference between the awareness of students and lecturers on AI technology adoption in business education programme and a no significant difference between student's and lecturer's preparedness on AIT adoption in business education programme. The study calls for institutional support, including policy reforms and infrastructure upgrades, to address barriers to AI adoption. This research contributes to the body of knowledge by demonstrating the interplay between awareness, preparedness, and digital literacy in driving AI adoption, offering valuable insights for educators, policymakers, and technology developers.

Keywords: Artificial Intelligence, Awareness, Preparedness, Adoption and Business Education.

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INTRODUCTION

In today's rapid advancement of technology, the adoption of artificial intelligence technology in teaching and learning has significantly brought about transformation particularly in the field of business education. This has been possible because the traditional methods of the teaching and learning process no longer meet the demand of learners and organisations. Also, Artificial intelligence technological innovations are influencing educational landscape on daily basis. According to Russell and Norvig (2020), Artificial intelligence technology (AIT) refers to the simulation of human intelligence such as learning, reasoning and/ or problem solving by machines and technologies, most especially computer systems, to perform tasks that typically require human intelligence. It deals with the use of computers or machines that perform functions in place of the human senses or intelligence. Artificial Intelligence (AI) helps to ensure that the systems and machines function as required that would help in generating the best results for the humanity (Ahmed et al., 2020). AIT has the potential to revolutionize this domain by enhancing motivation, improving performance, and contributing to long-term learning outcomes among students.

AIT has the transformative potential to reshape the educational landscape by enhancing motivation, improving performance, and fostering long-term learning outcomes among students. According to Luckin et al. (2016), AI-driven adaptive learning platforms personalize instruction by analysing individual learning behaviours, thereby increasing student motivation through tailored content delivery and pacing. This customization aligns with learners' needs and preferences, keeping them more engaged and invested in their education. Similarly, Holmes and Fadel (2019) posited that AI-powered tools improve student performance by providing real-time feedbacks and intelligent tutoring. These systems offer immediate insights into areas where students struggle, enabling timely interventions that strengthen understanding and mastery of complex concepts. Such precision in addressing learning gaps not only enhances performance but also builds learners' confidence in their academic abilities. Furthermore, Seldon and Abidoye (2018) emphasize AIT's role in equipping students with essential skills for long-term success. By integrating gamified learning experiences and collaborative AIT platforms, students develop critical thinking, problem-solving, and technological proficiency skills essential for thriving in the modern knowledge economy. These long-lasting benefits position students to excel not just academically but also professionally in a rapidly evolving world. AIT adoption in education involves the use of computer intelligent systems that can simulate human-like cognitive functions such as learning, reasoning, and problem-solving (Li et al., 2023).

Business education, which prepares students for careers in management, entrepreneurship, finance, and other related fields, must evolve to stay relevant and effective. The technological shift is especially relevant in business education programmes, where the integration of AIT offers vast opportunities to enhance learning outcomes, improve teaching methodologies, and equip students with skills that align with the demands of the twenty first century job market (Miao & Holmes, 2023). These systems, which include AIT-powered tutoring tools, adaptive learning platforms, and intelligent feedback mechanisms, have the ability to personalize learning experiences, identify gaps in student understanding, and offer tailored content to meet individual needs. As a result, lecturers and students in business education programmes are presented with a more engaging teaching and learning environment, which can significantly increase their performance during school and their relevance after graduation.

Although, without adequate awareness and preparedness, the integration of AIT technology may not yield the intended benefits or could even exacerbate existing challenges in business education. Without sufficient understanding of how AIT can enhance teaching and learning, educators risk misapplying these tools, resulting in inefficiencies and potential negative impacts on student outcomes. Peart et al. (2017) emphasized that awareness of AIT's potentials and limitations is critical, for educators and students to engage with it meaningfully. A lack of preparedness can lead to unrealistic expectations or misuse of AIT systems, creating frustration and diminishing trust in the technology. AIT is one of the core drivers of industrial development and a critical factor in promoting the integration of emerging technologies (Panch et al., 2019). Some of the problems associated with adoption of AIT in education globally include the resistant attitudes of educational stakeholders due to the cost for its procurement, maintenance and training requirement for teachers. Lu (2019) argued that inadequate training can exacerbate disparities within the classroom. Students and educators who are unfamiliar with AITs may fall behind, widening the digital divide. The relationship between AIT awareness, preparedness, and adoption in business education programmes is, therefore, a critical area of investigation. This study aims to explore how awareness and preparedness impact the effective adoption of AIT within business education, identifying the factors that facilitate or hinder this process. By examining this relationship, the study seeks to provide

valuable insights that can guide educators, policymakers, and institutions in developing strategies to harness AIT's potential, thereby enhancing the quality and relevance of business education in today's technology-driven world. Furthermore, Dong and Chen (2020) cautioned that unprepared adoption of AIT can disrupt traditional teaching methods without offering adequate alternatives, potentially eroding the quality of education and undermining confidence in these innovations. In light of the increasing importance of AIT in education and the need for a workforce equipped with advanced digital skills, this research is timely and significant. It will contribute to the body of knowledge on AIT integration in education and inform the design and implementation of business education programmes that are responsive to the changing dynamics of the modern economy.

Business education refers to the educational programs and courses designed to teach students about various aspects of business, including management, finance, marketing, accounting and entrepreneurship. Business education is a multifaceted field of study that provides individuals with the knowledge, skills, and competencies necessary to engage in various business-related activities, either as employees or entrepreneurs. It covers subjects such as accounting, finance, management, marketing, entrepreneurship, office technology, and information technology. According to Osuala (2004), business education equips learners with the necessary skills for gainful employment, self-reliance, and adaptability to the ever-changing business environment. By offering practical and theoretical training, it prepares students to effectively participate in the commercial and entrepreneurial sectors of the economy. According to Okifo and Ayo (2015), business education traditionally focused on imparting knowledge and skills related to management, accounting, marketing, and entrepreneurship, is increasingly influenced by the digital transformation that AIT brings. The goal of business education is to prepare students for careers in the business world by providing them with the knowledge, skills, and competencies necessary to succeed in a rapidly changing global economy. Furthermore, business education aims to develop individuals who are competent in managing business operations and capable of making sound financial and managerial decisions. As highlighted by Ukwueze and Uzoagba (2021), business education plays a critical role in fostering an entrepreneurial mindset among learners, thereby empowering them to identify opportunities, take risks, and innovate in the pursuit of business ventures. Through the acquisition of problem-solving, communication, and decision-making skills, students of business education are prepared to adapt to the dynamic demands of the global market.

The adoption of AIT into business education programmes has the potential to revolutionize teaching and learning process through offering opportunities that will enhance motivation, improve performance, and foster long-term learning outcomes. The ultimate goals of AIT field are to produce fully autonomous intelligent agents that will interact with their environments and find out optimal behaviours, improve over time through trial-and-error applications synonymous with human beings (Kayid, 2020). The integration of technology into business education has also been emphasized as a key component in preparing students for modern work environments. The inclusion of ICT in the curriculum ensures that students are not only equipped with conventional business skills but also possess the digital literacy required to excel in various business roles, whether in corporate organizations or entrepreneurial ventures. Moreover, business education contributes significantly to the socio-economic development of a nation. According to Nwosu (2010), the discipline fosters development of skilled workforces capable of driving economic growth and innovation. By promoting the acquisition of competencies in areas such as financial management, entrepreneurship, and office management, business education helps produce graduates who are self-reliant and capable of creating employment opportunities for themselves and for others,

thereby reducing unemployment rates and poverty levels. According to Ezeani and Urama (2014), proficiency in information and communication technology (ICT) is essential for business education graduates to thrive in today's technology-driven economy. In conclusion, business education is a vital discipline that offers a comprehensive approach to equipping individuals with necessary skills, knowledge, and competencies to succeed in various business endeavours. Its emphasis on practical experience, entrepreneurial mindset, technological proficiency, and socio-economic development underscores its importance in preparing students for the challenges and opportunities of the modern business world. As a result, business education serves as a catalyst for personal and national growth by fostering a generation of skilled professionals and entrepreneurs capable of contributing to the advancement of society.

While some studies have explored factors influencing AIT adoption, few have examined the interplay of awareness and preparedness as variable in the context of AIT adoption in business education programme. Without this understanding, efforts to adopt AIT in business education programmes may be less effective, leaving students and educators unprepared for the technological changes shaping the future of work. This research is essential to bridge the gap between awareness and preparedness with their influence on AIT adoption in business education. The study will inform policy decisions, curriculum development, and training programmes aimed at improving the integration of AIT into business education, ultimately enhancing the employability and technological competence of graduates in the digital economy.

Statement of the Problem

The rapid advancement in artificial intelligence technology (AIT) is reshaping various sectors, including education. In particular, AIT holds immense potential for transforming business education by improving teaching methodologies, streamlining administrative processes, and enhancing learning outcomes. However, the adoption of AIT in business education programmes remains uneven, especially in developing countries. This disparity in AIT adoption is often linked to awareness and preparedness levels among educators and students, as well as their digital literacy skills. Despite the growing recognition of AI's potential, there is limited empirical evidence on how Technology Awareness (TA) and Technology Preparedness (TP) influence its adoption in business education programmes. Many educators and students may be aware of AIT's existence, but may not fully understand its applications, benefits, and challenges within the educational context. Furthermore, the preparedness of educational institutions to integrate AIT into their programmes through infrastructure, policies, and curriculum development is often insufficient, contributing to the slow pace of adoption. Digital literacy, which encompasses the ability to use digital tools and technologies effectively, is critical for AIT adoption. Without a sufficient level of digital literacy, even well-meaning attempts at AIT adoption may fail, as individuals may not possess the necessary skills to implement or engage with AI technologies meaningfully. Thus, the problem this study sought to address is the limited understanding of how awareness and preparedness influence AIT adoption in business education programmes, particularly in the context of digital literacy levels.

Purpose of the Study

The purposes of the study was to determine the influence of awareness and preparedness on artificial intelligence technology adoption in business education programmes. Specifically, the study determined:

1. The influence of awareness on AI technology adoption in business education programme.

2. The influence of preparedness on AI technology adoption in business education programme.

Research Questions

1. What is the influence of awareness on AI technology adoption in business education programme?
2. The influence of preparedness on AI technology adoption in business education programme?

Hypotheses

1. There is no significant difference between awareness of students and lecturers on AI technology adoption in business education programme.
2. There is no significant difference between preparedness of students and lecturers on AI technology adoption in business education programme.

METHODOLOGY

The design of the study was descriptive survey research design. The target population includes 266 respondents comprising final-year students and lecturers in business education programmes. Purposive Sampling technique was used whereby a structured questionnaire was developed and used for the primary data collection. The questionnaire consists of sections: Awareness of AI Technology, which provides items, measures knowledge of AI tools, applications, and potential benefits in education. Preparedness for AI Adoption, which provides items, assesses readiness to use AI tools, including technical skills, infrastructure availability, and institutional support. AI Technology Adoption, which items evaluate the extent of AI usage in teaching and learning activities and digital literacy level which provides items that measure proficiency in using digital tools and platforms, assessing whether participants possess the skills necessary to engage effectively with AI. Five experts validated the questionnaire and the overall Cronbach Alpha coefficient reliability of Instrument accounted for 0.88 using Statistical Package for Social Sciences (SPSS). The questionnaire is distributed both physically and electronically. Participants are briefed on the study's purpose and assured of confidentiality. Mean and standard deviation method of analysis were conducted to answer research questions, while t-test analysis was conducted for the testing of the research hypotheses respectively.

RESULTS

Research Question One

What is the influence of awareness on AI technology adoption in business education programme?

Table 1: Mean and Standard Deviation Analysis of the Influence of Awareness on AIT adoption in Business Education Programme (N = 266)

S/N	Statements	$\overline{X}$	SD	Dec
1.	Awareness of AI trends push institutions to incorporate AI tools and topics into business education curriculum.	3.25	0.43	Agree
2.	I am more likely to explore AI applications independently when aware of AI technology	2.56	0.74	Agree
3.	AI awareness signals to educators the need to align learning content with current industry practices.	3.39	0.49	Agree

4.	Understand of AI, makes me more open and responsive to AI-based learning tools and platforms.	2.54	0.73	Agree
5.	AI awareness fosters my curiosity and excitement, leading to more active participation.	3.40	0.49	Agree
6.	I am aware of AI's business applications are more likely to pursue business related careers.	3.40	0.49	Agree
7.	My awareness of AI provide more informed feedback, helping institutions refine and improve business programmes	3.25	0.43	Agree
8	My knowledge of AI promotes a more personalized business learning experiences	2.65	0.76	Agree
9.	Awareness of AI can encourage adoption of AI-driven business educational platforms.	3.39	0.49	Agree
10.	AI awareness leads to student-led innovation, business startups, or research projects focused in business.	3.26	0.58	Agree
11.	Students who understand AI are more likely to advocate for AI integration in business education.	3.40	0.49	Agree
	Overall	**3.04**	**0.32**	**Agree**

Key: *$\overline{X}$=Mean, SD=Standard Deviation, Dec=Decision*

The result presented in Table 1 showed that all the items had means ranging from 2.54-3.40 which are within the mean range of 2.50-4.00. The respondents agree that Awareness of AI trends push institutions to incorporate AI tools and topics into business education curriculum (3.25), I am more likely to explore AI applications independently when aware of AI technology (2.56), AI awareness signals to educators the need to align learning content with current industry practices (3.39), understand of AI, makes me more open and responsive to AI-based learning tools and platforms (2.54), AI awareness fosters my curiosity and excitement, leading to more active participation (3.40), I am aware of AI's business applications are more likely to pursue business related careers (3.40), my awareness of AI provides more informed feedback, helping institutions refine and improve business programmes (3.25), my knowledge of AI promotes a more personalized business learning experiences (2.65), awareness of AI can encourage adoption of AI-driven business educational platforms (3.39), AI awareness leads to student-led innovation, business startups, or research projects focused in business (3.26) and students who understand AI are more likely to advocate for AI integration in business education (3.40). The overall mean value of 3.04, which indicated that awareness influences AI technology adoption in business education programme. This also indicates that students generally perceive themselves as having high level of awareness which can be used for the adoption of AI technology adoption. This suggests that cultivating the knowledge about AI and its uses, influence its adoption in business education programmes. Summarily, the findings imply that awareness of AI is an important tool that effectively fosters adoption and inclusion of AI learning in business education curriculum and institutions offering business education programmes. Since the mean is above average, most students are highly confident in their awareness of AIT. Furthermore, Table 1 showed that the standard deviation ranged from 0.43-0.76 with a variation of 0.33 which implied that the responses of the respondents were consistent and close to each other with high agreement and the value close to the mean. The standard deviation is relatively low, indicating that responses are fairly consistent and clustered around the mean. This imply that most students have similar perceptions of the influence of awareness on adoption of AI in business education programmes, with minimal variation in opinions. The low standard deviation suggests agreement among respondents, meaning that external factors influencing their perceptions may be similar.

Hypothesis One:

There is no significant difference between awareness of students and lecturers on AI technology adoption in business education programme.

Table 2

The t-test Analysis of the Mean Responses of Students and Lecturers on the Influence of Awareness on AIT adoption in Business Education Programme (N = 266)

S/N	Skills Items	Students		Lecturers		df	t-cal	P-Value	Remark
		$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2				
1.	Awareness of AI trends push institutions to incorporate AI tools and topics into business education curriculum.	3.23	0.42	3.28	0.45	264	-0.88	0.09	NS
2.	I am more likely to explore AI applications independently when aware of AI technology	2.56	0.74	2.56	0.74	264	-0.09	0.95	NS
3.	AI awareness signals to educators the need to align learning content with current industry practices.	3.38	0.49	3.40	0.49	264	-0.38	0.46	NS
4.	Understand of AI, makes me more open and responsive to AI-based learning tools and platforms.	2.53	0.69	2.57	0.81	264	-.51	0.01	S
5.	AI awareness fosters my curiosity and excitement, leading to more active participation.	3.38	0.49	3.43	0.50	264	-0.72	0.19	NS
6.	I am aware of AI's business applications are more likely to pursue business related careers.	3.38	0.49	3.43	0.50	264	-0.72	0.19	NS
7.	My awareness of AI provide more informed feedback, helping institutions refine and improve business programmes	3.23	0.42	3.28	0.45	264	-0.88	0.09	NS
8	My knowledge of AI promotes a more personalized business learning experiences	2.65	0.76	2.64	0.76	264	0.17	0.95	NS
9.	Awareness of AI can encourage adoption of AI-driven business educational platforms.	3.38	0.49	3.40	0.49	264	-0.38	0.46	NS
10.	AI awareness leads to student-led innovation, business startups, or research projects focused in business.	2.29	0.60	2.22	0.53	264	0.85	0.10	NS
11.	Students who understand AI are more likely to advocate for AI integration in business education.	3.38	0.49	3.43	0.50	264	-0.72	0.19	NS
	GRAND	**3.04**	**0.33**	**3.06**	**0.32**	**264**	**-0.57**	**0.98**	**NS**

Key: $\bar{X}_1$*= Mean of lecturers;* $\bar{X}_2$*= Mean of students;* ***SD_1****= Standard deviation of Lecturers;* ***SD_2****= Standard deviation of students;* ***df****= degree of freedom;* ***P-value****= Probability value (2-tailed);* ***t-cal****= test calculated;* ***S****= Significant;* ***NS****= Not Significant.*

Table 2 presents the summary of t-test analysis on the responses of students and lecturers on the influence of awareness on AIT adoption in business education programme. The data revealed that item 4 had probability value of 0.01 which is less than the criterion value of 0.05 at 264 degree of freedom. This means that there is significant difference with reference to that AIT awareness item. Hence, the null hypothesis of no significant difference between awareness of students and lecturers on AI technology adoption in business education programme was rejected. On the other hand, null hypothesis of no significant difference for items 1, 2. 3, 5, 6, 7, 8, 9, 10 and 11 was accepted since the p-value of these items, range from 0.09 to 0.98 are greater than 0.05. However, the grand result of the analysis indicated p-value of 0.98 which shows a non-significant value. Hence, the null hypothesis is accepted that there is no significant difference between student's and lecturer's awareness on AIT adoption in business education programme. However, the result of the t-test analysis shows that students

had a grand mean of 3.04, while lecturers had grand mean of 3.06 indicating that possess more awareness of AIT than the students.

Research Question Two

The influence of preparedness on AI technology adoption in business education programme?

Table 3: Mean and Standard Deviation Analysis of the Influence of Preparedness on AIT adoption in Business Education Programme (N = 266)

S/N	Statements	$\overline{X}$	SD	Dec
1.	My knowledge and skills in digital technology make it easier for me to adopt AI.	3.21	0.41	Agree
2.	I am ready to adopt AI tools in my academic tasks if given the opportunity.	3.05	0.39	Agree
3.	Having access to AI-related tools increases my likelihood of using them.	3.31	0.55	Agree
4.	I have the skills required to operate AI-powered educational tools.	3.20	0.40	Agree
5.	Without proper preparedness, I would find it difficult to adopt AI in my studies.	3.20	0.40	Agree
6.	Being prepared helps me use AI tools more effectively and efficiently	3.10	0.55	Agree
7.	I am confident in using basic computer applications (e.g., MS Word, Excel, PowerPoint).	3.05	0.22	Agree
8.	I can use software or platforms that support AI (e.g., Google AI tools, Grammarly, ChatGPT).	3.25	0.43	Agree
9	I am willing to learn more about AI and how it can be used in my field of study.	3.20	0.40	Agree
10	I am enthusiastic about using AI tools to improve my academic performance.	3.11	0.43	Agree
11	I am willing to learn more about AI and how it can be used in my field of study.	3.20	0.40	Agree
	Overall	**3.17**	**0.24**	**Agree**

Key: *$\overline{X}$=Mean, SD=Standard Deviation, Dec=Decision*

The result presented in Table 3 showed that all the items had means ranging from 3.05-3.31 which are within the mean range of 2.50-4.00. This implied that the respondents agree that my knowledge and skills in digital technology make it easier for me to adopt AI (3.21), I am ready to adopt AI tools in my academic tasks if given the opportunity (3.05), Having access to AI-related tools increases my likelihood of using them (3.31), I have the skills required to operate AI-powered educational tools (3.20), Without proper preparedness, I would find it difficult to adopt AI in my studies (3.20), Being prepared helps me use AI tools more effectively and efficiently (3.10), I am confident in using basic computer applications (e.g., MS Word, Excel, PowerPoint) (3.05), I can use software or platforms that support AI (e.g., Google AI tools, Grammarly, ChatGPT) (3.25), I am willing to learn more about AI and how it can be used in my field of study (3.20), I am enthusiastic about using AI tools to improve my academic performance (3.11) and I am willing to learn more about AI and how it can be used in my field of study (3.20). The overall mean value of 3.17, which indicated that students' preparedness of the use and learning AIT influence its adoption in business education programme. This also indicates that students generally perceive themselves as having high level of preparedness which can be used for the adoption of AI technology adoption. This suggests that students' readiness for the use of AI, influence its adoption in business education programmes. Summarily, the findings imply that students' preparedness in the use of AI is an important tool that effectively fosters adoption and inclusion of AI learning in business education curriculum and institutions offering business education programmes. Since the mean is above average,

most students and lecturers in business education programme are highly confident in their preparedness of AIT usage. Furthermore, Table 3 showed that the standard deviation ranged from 0.22-0.55 with a variation of 0.33 which implied that the responses of the respondents were consistent and close to each other with high agreement and the value close to the mean. The standard deviation is relatively low, indicating that responses are fairly consistent and clustered around the mean. This imply that most students have similar perceptions of the influence of preparedness on adoption of AI in business education programmes, with minimal variation in opinions. The low standard deviation suggests agreement among respondents, meaning that external factors influencing their perceptions may be similar.

Hypothesis Two:

There is no significant difference between preparedness of students and lecturers on AI technology adoption in business education programme.

Table 4

The t-test Analysis of the Mean Responses of Students and lecturers on the Influence of Preparedness on AIT adoption in Business Education Programme (N = 266)

S/N	Skills Items	Students		Lecturers		df	t-cal	P-Value	Remark
		$\bar{X}_1$	SD_1	$\bar{X}_2$	SD_2				
1.	My knowledge and skills in digital technology make it easier for me to adopt AI.	3.24	0.43	3.15	0.36	264	1.75	0.00	S
2.	I am ready to adopt AI tools in my academic tasks if given the opportunity.	3.08	0.46	3.00	0.00	264	1.52	0.00	S
3.	Having access to AI-related tools increases my likelihood of using them.	3.25	0.57	3.41	0.50	264	-2.41	0.79	NS
4.	I have the skills required to operate AI-powered educational tools. My preparedness determines how confident I feel about using AI tools.	3.23	0.43	3.15	0.36	264	1.65	0.00	S
5.	Without proper preparedness, I would find it difficult to adopt AI in my studies.	3.16	0.37	3.28	0.45	264	-2.33	0.00	S
6.	Being prepared helps me use AI tools more effectively and efficiently	3.08	0.63	3.15	0.36	264	-1.03	0.00	S
7.	I am confident in using basic computer applications (e.g., MS Word, Excel, PowerPoint).	3.08	0.27	3.00	0.00	264	2.77	0.00	S
8.	I can use software or platforms that support AI (e.g., Google AI tools, Grammarly, ChatGPT).	3.23	0.43	3.27	0.44	264	-0.58	0.26	NS
9	I am willing to learn more about AI and how it can be used in my field of study.	3.23	0.43	3.15	0.36	264	1.65	0.00	S
10	I am enthusiastic about using AI tools to improve my academic performance.	3.09	0.47	3.14	0.35	264	-0.91	0.25	NS
11	I am willing to learn more about AI and how it can be used in my field of study.	3.23	0.43	3.15	0.36	264	1.65	0.00	S
	Overall	**3.17**	**0.29**	**3.17**	**.11**	**264**	**0.16**	**0.00**	**S**

Key: $\bar{X}_1$*= Mean of lecturers;* $\bar{X}_2$*= Mean of students;* ***SD₁****= Standard deviation of Lecturers;* ***SD₂****= Standard deviation of students;* ***df****= degree of freedom;* ***P-value****= Probability value (2-tailed);* ***t-cal****= test calculated;* ***S****= Significant;* ***NS****= Not Significant.*

Table 4 presents the summary of t-test analysis on the responses of students and lecturers on the influence of preparedness on AIT adoption in business education programme. The data revealed that items 1, 2, 4, 5, 6, 7, 9 and 11 had probability value less than 0.05 which is the criterion value of 0.05 at 264 degree of freedom. This means that there is significant difference with reference to that AIT preparedness items. Hence, the null hypothesis of no significant difference between preparedness of students and lecturers on AI technology adoption in business education programme was rejected. On the other hand, null hypothesis of no significant difference for items 3, 8 and 10 was accepted since the p-value of these items, range from 0.25 to 0.79 are greater than 0.05. However, the grand result of the analysis indicated p-value of 0.00 shows a significant value. Hence, the null hypothesis is rejected that there is no significant difference between student's and lecturer's preparedness on AIT adoption in business education programme.

Discussion of Findings

The findings based on the results obtained in this study which are analysed and presented in Tables 1, 2, 3, and 4 respectively were discussed thus:

The results in research questions 1, show agreement of the influence of awareness on AIT adoption in business education programme. This means that awareness influences AI technology adoption in business education programme. This suggests that cultivating the knowledge about AI and its uses, influence its adoption in business education programmes. Summarily, the findings imply that awareness of AI is an important tool that effectively fosters adoption and inclusion of AI learning in business education curriculum and institutions offering business education programmes. According to Hasan et al. (2023) higher technological awareness fosters increase in AIT knowledge and significantly influencing its adoption. Awareness in AI's reliability and ethical use is critical for acceptance, as awareness builds confidence in its applications. More so, the result of the study indicates that students generally perceive themselves as having high level of awareness which can be used for the adoption of AI technology adoption. Rahman et al. (2021) in their study, it asserted that awareness of broader digital technologies positively correlates with AI adoption. The results of the hypothesis 1, reveal that there is no significant difference between student's and lecturer's awareness on AIT adoption in business education programme. According to Chalutz Ben-Gal (2023), technology awareness (TA) plays a foundational role by shaping perceptions, reducing resistance to new technologies, and creating an environment conducive to AIT adoption. When educators and students are well-informed about the benefits and applications of AIT, they are more likely to integrate such technologies into their teaching and learning processes (Teng et al., 2023). This underscores the need for institutions to invest in awareness campaigns, workshops, and continuous personnel developments to ensure that educators and students remain updated on AIT advancements.

For research question 2, the result of the study show that students' and lecturers' preparedness of the use and learning AIT influence its adoption in business education programme. This also indicates that students and lecturers generally perceive themselves as having high level of preparedness which can be used for the adoption of AI technology adoption. This suggests that readiness for the use of AI, influence its adoption in business education programmes. Summarily, the findings imply that preparedness in the use of AI is an important tool that effectively fosters adoption and inclusion of AI learning in business education curriculum and institutions offering business education programmes. A study by Shonubi (2024) highlighted that technology preparedness plays a crucial role in the adoption of AI technologies within organizations. More so, the results of hypothesis 2 shows that there is a significant difference between student's and lecturer's preparedness on AIT adoption in

business education programme. This is in agreement with a study on in-service teachers' technology preparedness for AI education by Cowen & Tabarrok (2023) who found that the level of TP of teachers could impact the adoption of AI technologies in educational settings. The readiness of educators and students in terms of skills, infrastructure, and attitudes toward AIT is crucial for successful adoption. Technology preparedness involves having access to AI tools, sufficient knowledge of their operation, and a positive disposition toward experimenting with new teaching and learning methodologies that incorporate AIT. The results of this study emphasize that educators who feel more prepared are more likely to adopt AIT effectively, leading to more innovative and interactive teaching-learning approaches. This study agrees with According to Joshua and Apuru (2024), teachers and students who possess digital skills feel more inclined to perform better in the teaching and learning process, as they will feel more invested in the learning process. Furthermore, Moravec et al. (2024) studied and found that digital literacy, awareness, and preparedness both play crucial roles in the adoption and utilization of AI technologies across various domains including academic programmes.

Conclusion

This study aimed to examine the influence of awareness and preparedness on the adoption of artificial intelligence (AI) technology adoption in business education programmes. The findings reveal that both technology awareness and preparedness significantly influence the adoption of AIT in business education. Awareness and preparedness plays a foundational role by shaping perceptions, reducing resistance to new technologies, and creating an environment conducive to AIT adoption.

Recommendations

This research recommends that institutions prioritize enhancing AIT awareness and preparedness among educators and students to maximize the benefits of AIT adoption in business education. Offering training sessions, promoting hands-on use of AI tools, and integrating DL into the core curriculum can significantly improve the overall adoption rates of AIT. To foster a conducive environment for AIT integration, institutions must not only raise awareness and ensure preparedness but also elevate digital literacy levels. By addressing these three factors collectively, business education programmes can equip both educators and students with the necessary skills and mindset to harness the full potentials of AIT, ultimately leading to more dynamic, future-ready educational outcomes. The findings of this research contribute to the growing body of knowledge on educational technology adoption and offer practical recommendations for policymakers and educators aiming to leverage AIT in business education.

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