



## **LEVERAGING THE POTENTIALS OF ARTIFICIAL INTELLIGENCE (AI) TOOLS: CHAT GENERATIVE PRE-TRAINED TRANSFORMER (CHATGPT) IN TEACHING AND LEARNING OF BUSINESS EDUCATION PROGRAMME IN TERTIARY INSTITUTIONS IN NIGERIA**

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### **Abstract**

*Business education is a programme of study that prepares students to acquire practical skills, attitudes, understanding and knowledge relating to occupations, employability and decent work in various sectors of the economy. Recently, teaching and learning globally is impacted by ChatGPT and AI. The potentials of ChatGPT and Artificial Intelligence in teaching and learning of business education programme in tertiary institutions cannot be viewed in isolation. This is because teaching and learning of business education is impacted by advances in technology which leads to employability and decent work for students. Therefore, ChatGPT is one of the AI tools that can be used to transform teaching and learning of business education in tertiary education. Specifically, this study explores the use of ChatGPT in tertiary education, application of ChatGPT's in teaching and learning, challenges and implication for business education programme.*

**Keywords:** *ChatGPT, Artificial Intelligence business education programme*

### **Introduction**

In recent years, Artificial intelligence (AI) has shown great potential in transforming various aspects of education, ranging from personalized learning experiences to intelligent tutoring systems. Among the emerging AI trends is Generative Pre-trained Transformer (ChatGPT). ChatGPT is a Large Language Model (LLM) developed by OpenAI in 2022. It is an AI tool designed to understand natural language and generate intelligent and relevant responses to user queries (OpenAI, 2022). Mintz, (2023) stated that it is equipped with the potential ability to read and produce course syllabi drafts, tutor students to explain terms and abstract concepts and theories. It has the potential of transform the way students learn and instructors teach. Zawacki-Richter et al., (2019) added that the application of ChatGPT include personalized learning, advanced data analysis for student success which leads to overall quality of education. By leveraging its advanced natural language processing capabilities, ChatGPT can provide a human-like interactive experience that can be effectively integrated into educational settings. The potentials of ChatGPT and Artificial Intelligence in teaching and learning of business education programme in tertiary institutions cannot be viewed in isolation. This is because teaching and learning of business education is impacted by advances in technology which leads to employability and decent work for students. Therefore, ChatGPT is one of the AI tools that can be used to transform teaching and learning of business education in tertiary education. Specifically, this study explores the use of ChatGPT, application of ChatGPT's in teaching and learning, challenges and implication for business education programme.

### Use of ChatGPT in Tertiary Education

Researchers like Luan et al., (2023) and Lin (2023) explored the use of ChatGPT in various study and its potentials to engage in human-like conversations. As a virtual tutor, ChatGPT can assist learners in tertiary education to create learning goals and personalized learning plans. It can provide the learners with resources for difference learning styles, including media resources, journal articles, and practical activities. ChatGPT can also be used to monitor and evaluate learners' learning performance by providing suggestions and feedback on their learning progress with the aim of improving learning outcomes. ChatGPT can generate self-assessment tools for learners to evaluate their learning progress and then provide personalized recommendations or learning strategies to enhance their learning in a meaningful and constructive way.

**Fig. 1: APPLICATION OF CHATGPT IN TERTIARY INSTITUTIONS**



**Source: OpenAI (2023)**

Among the opportunities of ChatGPT is its ability to adapt to various educational contexts, making it a very useful tool for educators and learners (Selçuk, 2023). ChatGPT can transform several aspects of education opportunities especially in tertiary education of learning. OpenAI (2023) stated that it can be used for information retrieval, answering specific queries, engaging in open conversations and discussions, tutoring assistance, generating software codes, and translating the text into other languages.

Integrating ChatGPT into business education programme can improve the learning experience for students and provide them with personalized and immediate support. In the work of Bozkurt and Sharma (2023), it is evidenced that generative AI can enhance engagement and create more tailored learning experiences. ChatGPT can contribute to a more inclusive and accessible learning environment. This AI-powered tool can assist in bridging the distance between students from diverse backgrounds and skill levels by aiding in multiple languages and catering to various learning requirements. It has the ability to facilitate students' critical thinking and problem-solving skills among other benefits. AI technologies have the potential to completely transform how teaching and learning in tertiary education is done. ChatGPT is a tool that can deliver individualized learning to students, increase collaboration and communication, and improve student learning results. Other opportunities are related to assessment innovation, instructional support, remote learning support, research design and development support, academic writing support, and administrative assistance and productivity.

**Fig. 2: HOW CHATGPT CAN HELP TEACHERS**



**Source: OpenAI (2023)**

The potentials of ChatGPT in teaching and learning in the classroom have many benefits for teachers. StudyCorgi (2023) stated that with the use of chatbot, teachers can save time on various tasks. For instance, lesson planning, responding to parents' e-mails, or creating handouts is easier and less time-consuming. In the different research study of Kasneci et al., (2023), Lee, (2023) Zhai, (2023), it is stated that ChatGPT can also help teachers create learning evaluations such as monthly tests, semester tests, or even projects or assignments. In a similar vein, educators can leverage ChatGPT to quickly generate scenarios, quizzes, and exercises for evaluating students' learning outcome (Khan et al., 2023; Wang et al., 2023). Before the advent of ChatGPT, automatic assessment process was not possible. This is because it required hours of preparation time to develop such assessment tasks to meet learning objectives. It therefore means that through ChatGPT, some main duties that take up much of teachers' time could be reduced.

AI tools, like ChatGPT, can be used by teachers to help with preparing the instructional materials for lectures, providing guidance to students, enhancing the quality of learning experiences, undertaking academic research, and working more efficiently and productively. Kraugusteeliana et al. (2023) stated that with the aid of AI tools like ChatGPT, teachers could deliver higher-quality instruction that will be of benefit to their students. Dergaa et al (2023) indicated that one of the most challenging domains for university lecturers and students in tertiary

education has been overcome by ChatGPT. This is because the use of ChatGPT could elevate the efficiency of academic writing.

It is often said that assessment and feedback are the cornerstones of learning in tertiary education. This is confirmed in the various study of Atlas (2023), Baidoo-Anu & Ansah (2023), Cotton et al. (2023) and Ray (2023). ChatGPT has the potential to assess any form of learning evaluation and give feedback to students immediately which is the catalyst for enhancing students' learning growth and saving teachers' time. Cotton et al. (2023) stated that ChatGPT can be used for grading students' assignments automatically, especially for written assignments. This makes it very convenient for teachers to give feedback to students on their essays promptly (Farrokhnia et al., 2023; Mizumoto & Eguchi, 2023). Teachers could also have more time to concentrate on other important aspects of teaching to enhance students' learning experience and development, such as providing individualized support and attending continuous professional development (Sok & Heng, 2023).

In the work of Shaikh et al. (2023), ChatGPT has the potential to help students learn new languages, practice grammar, and improve their communication skills through conversational practice. Students can also use ChatGPT for identifying, fixing, and receiving suggestions for grammar mistakes as well as practice vocabulary learning.

Fig. 3

## How ChatGPT Can Help Students



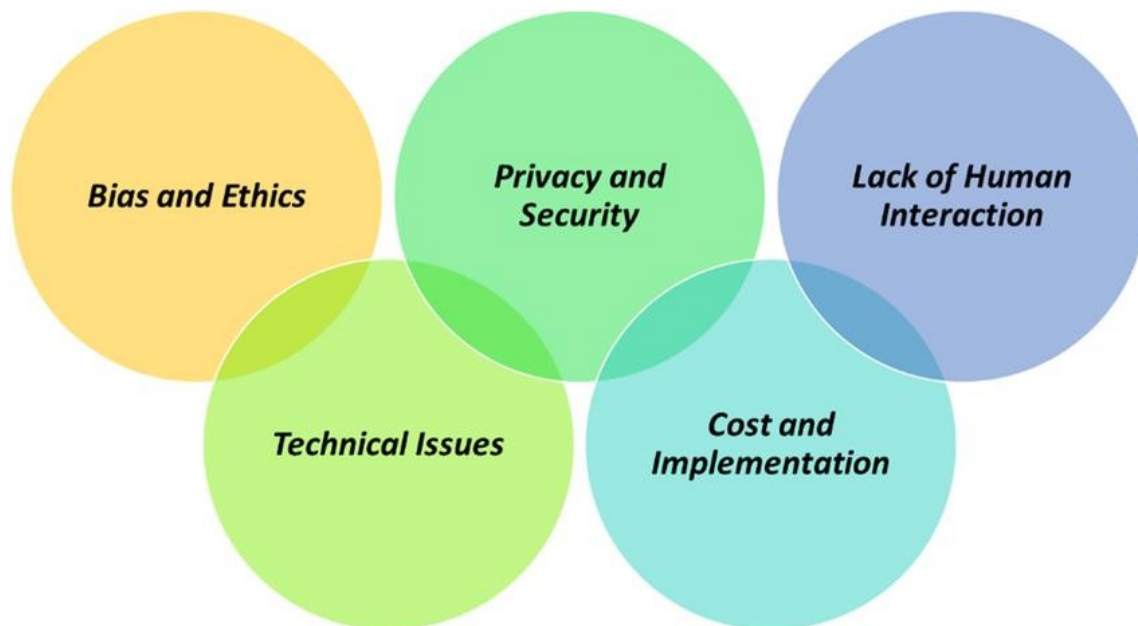
**Source: OpenAI (2023)**

ChatGPT has the potential to help students learn to write well-worded, specific search requests and analyze the information they look up for. Selçuk, (2023) asserted that students live in a digital information age and knowing how to search for reliable information is a fundamental skill. It can make classrooms more inclusive by helping people with disabilities such as dyslexia and various disorders of written expression improve their texts easily. It can enhance the quality of essays and research papers. ChatGPT generates well-written, coherent sentences that can be used as examples while being a source of inspiration for students' own writing. While AI-generated texts appear impressive, [they can also be nonsensical and based on fabricated facts](#). That is because the chat gets information from the data it has been trained on. Its knowledge is limited, and everything it produces needs to be double-checked.

Nevertheless, there are some challenges in the use of ChatGPT, such as ethical concerns and implementation issues. Educators must demonstrate the ethical use of ChatGPT in teaching

and research to address these challenges (Raman et al., 2023; Wen & Wang, 2023). Halaweh (2023) argues in favor of incorporating ChatGPT into education and offers strategies and techniques for the successful and responsible implementation of ChatGPT in teaching or research. To ensure that students utilize ChatGPT effectively, educators should also nurture a culture of critical thinking and evidence-based reasoning, helping students determine the reliability and validity of information generated by AI tools like ChatGPT (Wen & Wang, 2023).

**Fig. 4: CHALLENGES OF USING CHATGPT IN TERTIARY EDUCATION**



**Source: OpenAI (2023)**

Despite the numerous benefits and opportunities offered by ChatGPT, there are challenges using the AI tool in tertiary education. Many researchers like Anderson et al. (2023) Atlas (2023) and Crawford et al. (2023) argued the academic integrity among students due to the potential misuse or unethical use of ChatGPT. This involve cheating, misuse and plagiarism. Furthermore, it has been observed that many higher educational institutions and academic staff have expressed concerns about the increasing risks associated with cheating and plagiarism, as students use ChatGPT to produce their essays and complete other tasks (Sabzalieva & Valentini, 2023). In other words, misconduct in academic integrity could occur when students utilize ChatGPT to generate essays, reports, or articles without any proper citations. Halaweh (2023) stated that plagiarism could be committed when students claimed the texts produced by ChatGPT as their own work.

Furthermore, educators must demonstrate the ethical use of ChatGPT in teaching and research to address these challenges (Raman et al., 2023; Wen & Wang, 2023). Halaweh (2023) argues in favor of incorporating ChatGPT into education and offers strategies and techniques for the successful and responsible implementation of ChatGPT in teaching and research. This is to ensure that students utilize ChatGPT effectively. Educators should also nurture a culture of critical



thinking and evidence-based reasoning, helping students determine the reliability and validity of information generated by AI tools like ChatGPT (Wen & Wang, 2023).

According to García-Peñalvo (2023), it is crucial to consider the ethical implications and limitations of ChatGPT and AI technologies in educational setting. Limitations and hazards associated with using ChatGPT in education include the potential for perpetuating biases, producing, and spreading misinformation, positioning itself as the ultimate epistemic authority without sufficient evidence, and ethical concerns such as environmental impact, content moderation, and copyright infringement (Qadir, 2022; Rahman & Watanabe, 2023; Cooper, 2023; Sallam, 2023).

As with any technology, the use of ChatGPT in education raises ethical considerations and concerns. It is crucial to establish guidelines and frameworks to ensure the responsible and ethical implementation of ChatGPT in educational settings. ChatGPT's interactions with students generate valuable data that needs to be handled with care. Educational institutions should have clear policies and protocols in place to protect students' privacy and ensure data security. Privacy and data protection measures with ChatGPT mitigate the risks of unauthorized access or misuse of sensitive information. ChatGPT's responses are based on the data it was trained on, which can introduce biases and unfairness in its outputs. It is important to regularly evaluate and update ChatGPT's training data to minimize biased or discriminatory responses. Ensuring bias-free and fair responses with ChatGPT promotes inclusivity and equal opportunities in education.

Educational institutions using ChatGPT should be transparent about its capabilities, limitations, and underlying technology. Clear guidelines and standards should be established to ensure accountability for the decisions and actions of ChatGPT. Accountability and transparency with ChatGPT build trust among students, teachers, and other stakeholders in the educational ecosystem.

### **Implications to Business Education Programme**

ChatGPT is an emerging AI tool that can be used to upgrade the skills of lecturers and students of business education. This according to Sabzalieva and Valentini (2023) can be done by designing and delivering training content on how to leverage ChatGPT in business education programme. In order to optimize its strengths, Sok and Heng, (2023) stated that ChatGPT offers a lot of benefits for academic purposes. This implies that educational policymakers should partner with information technology teams to initiate training schemes that are aligned with the training needs of lecturers and students of business education. The training content can, for example, include the benefits and limitations of using ChatGPT for academic purposes (Lee, 2023), with the aim of equipping students and lecturers with the necessary skills to evaluate and analyze the outputs generated by ChatGPT. With the training on how to use ChatGPT, not only could students stay away from academic misconduct, but they could also acquire essential skills to succeed in their future academic or professional endeavors. AI tools can generate lively classroom discussions that can ask students of business education to critically engage with knowledge and experiences in the business fields. This approach may be particularly transformative in revolutionizing business education.

### **Conclusion**

ChatGPT can provide a human-like interactive experience that can be effectively integrated into educational settings. Among the applications of chatGPT is its ability to adapt to various educational contexts making it a very useful tool for educators and learners. The potentials of ChatGPT and AI in teaching and learning of business education programme in tertiary institutions



is apt. This is because teaching and learning of business education is impacted by advances in technology which leads to employability and decent work for students. Therefore, ChatGPT is one of the AI tools that can be used to transform teaching and learning of business education in tertiary education. This study explores the use of ChatGPT, application of ChatGPT's inteaching and learning, challenges and implication for business education programme.

### Recommendations

The following recommendations were drawn from the study.

1. There is need for tertiary institutions offering business education programme to establish a clear vision, policies, strategies, and plans to support ChatGPT and AI integration in the teaching and learning of business education programme
2. There should be change management support to combat resistance to change and resistance to technology and digital transformation by teachers and facilitators of business education programme
3. Tertiary institutions should provide avenues for professional development of business educators in the emerging technologies and digitalization process used in teaching and learning of business education programme.
4. There is need for tertiary institutions in Nigeria to update and integrate emerging technologies and digitalization into the curriculum of business education programme.
5. Adequate funding of business education programme at the tertiary education institution is recommended to ensure technology and digitalization of teaching and learning process.
6. Government should provide the enabling environment for emerging technology that supports the digitalization of business education programme in all tertiary institutions in Nigeria.

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