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Exploring Perception of Trainee Teachers at the Malaysian Institute of Teacher Education towards Chatbot-Based Artificial Intelligence: ChatGPT

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ABSTRACT

The widespread application of ChatGPT's artificial intelligence (AI) technology has brought about a transformation in education, especially at the higher education level. Looking at the development of integrating AI technology in education today, the way to obtain teaching and learning information has become easier and faster. This integration has formed futuristic learning. The study aims to explore the perception of trainee teachers at the Malaysian Institute of Teacher Education (MITE) towards Chatbot-based artificial intelligence, namely ChatGPT. The study methodology is quantitative, using a survey method. Data was obtained through a questionnaire instrument conducted on 194 trainee teachers at the Malaysian Institute of Teacher Education, Sarawak Campus who were randomly selected. The results of the study showed that the level of perception of MITE trainee teachers towards artificial intelligence (AI) Chatbot: ChatGPT was at a high level with an average mean of 4.02 and a standard deviation of 0.84. The results of the study also showed that trainee teachers had a moderate acceptance of the credibility-related dimension of ChatGPT as a reliable source of information with an average mean of 3.34 and a standard deviation of 0.91. In conclusion, the study has helped identify the level of perception of trainee teachers towards ChatGPT to meet the needs by enhancing its use in education. The implication of the study is that further exploration of the potential, benefits and challenges of AI technology such as ChatGPT in education based on futuristic learning should be carried out using various other research methods

1. Introduction

Futuristic learning leads to educational approaches and methods that leverage the use of cutting-edge technology to prepare students for future challenges and opportunities. The rapid advancement of Information and Communication Technology (ICT) has brought significant changes in how individuals learn, work, interact. This requires the development of skills to effectively apply these technologies, which a crucial in fostering a paradigm shift in the world of education. Through the implementation of the Malaysia Education Blueprint 2013-2025, the Ministry of Education (MOE) emphasizes the importance of understanding performance and challenges as well as outlining a

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comprehensive transformation of the Malaysian education system. In fact, in line with the seventh shift of the Malaysia Education Blueprint 2013-2025, there is a focus to leveraging ICT to scale up quality learning across Malaysia. This shift emphasizes strengthening teaching and learning through the use of ICT in schools [1].

From the perspective of a world that is increasingly dominated by the digital age, artificial intelligence (AI) technology is rapidly evolving across various sectors, including higher education institutions [2]. Artificial intelligence (AI) has the potential to transform various disciplines in the field of education and its application is increasingly prevalent [8]. One of the technologies in this digital age that can help teachers and students in education as an effective digital application is AI-based Chatbot application, ChatGPT, introduced by OpenAI.com. Along with the advancement of technology, Ministry of Education(MOE) launched the Digital Education Policy on 28 November 2023 to produce a generation skilled in digital technologies and competitive in the global arena. This makes it clear that educators with high digital skills are needed in the effort to apply the use of technology in the teaching and learning process. This argument is in line with Sobian's opinion [4] which states that teachers must first posses digital skills before teaching these skills to students in schools. However, there is a significant gap between the real-world needs and the current education system, which is still in the old notch [23].

Given the need for teachers to competently use digital applications like AI-based ChatGPT, it is essential for future teachers or trainee teachers in higher education institutions to be prepared and to understand the benefits of using such technologies in education. The use of the AI application ChatGPT can facilitate trainee teachers in acquiring information and ideas to support the completion of assignments and activities during their studies. According to the ability, the application solves students' problems such as answering questions and providing suggestions for solving assignments, especially in academic or scientific writing tasks.

Referred to previous research by Salmi [25] in Indonesia, which analyzed students' perceptions of using ChatGPT in the era of Education 4.0, it showed that students had a positive perception of using ChatGPT in self-development, quality improvement, creativity, time efficiency, and learning productivity. However, Salmi's study [25] suggests several indicators that need to be considered in the development and implementation of ChatGPT, such as access difficulties and challenges to students' creativity in writing. Ngo's study [26], in Vietnam, which aimed to investigate university students' perceptions of using ChatGPT for learning, including its benefits, barriers, and potential solutions, found that students had a positive view of the ChatGPT application, such as saving time, providing information across various fields, offering personalized guidance and feedback, and helping to clarify ideas in writing. Both the overseas studies by Salmi [25] and Ngo [26] are among the research related to students' perceptions of using ChatGPT. Meanwhile, one of the studies in Malaysia by Mizan and Norman [27], which examined the perceptions of pre-university students at a private university in Malaysia towards generative AI technology, suggests that more research should be conducted to investigate perceptions of the use of generative AI in the field of education. The study by Samsudin *et al.,* [28] examined the perceptions of prospective teachers at MITE regarding the impact of AI applications in teaching and learning, based on nine aspects: (i) facilitating the search for teaching and learning materials, (ii) increasing student interest, (iii) determining appropriate teaching methods, (iv) diversifying teaching methods, (v) providing learning according to students' levels, (vi) saving time for teachers in making explanations, (vii) making the assessment process more accurate, (viii) enhancing student creativity, and (ix) shaping students' character and manners. For the analysis of the findings in Samsudin *et al.,* [28] 's study, the data obtained from the questionnaire were analyzed based on the percentage of agreement. Upon reviewing these studies, there has not yet been any research focusing on perceptions of ChatGPT conducted at MITE using

data analysis based on mean values. Therefore, this study needs to be conducted to fill this research gap, so that this exploration will be the basis to guide future studies and the integration of AI technology advancements in teacher training at MITE.

In terms of significance, this study helps to understand the attitudes of trainee teachers towards ChatGPT, an AI Chatbot-based that provides information and support for learning. This study also helps researchers to understand and explore the perception of trainee teachers using ChatGPT and study ways to enhance its usage to meet their educational needs. Research is the core of teacher professional development and one of the aspects that helps to improve teacher competence [10,13]. Therefore, the objective of this study is to examine the perception of trainee teachers towards Chatbot-based artificial intelligence: ChatGPT, involving six dimensions: (i) Perception of the Usability or Benefits of ChatGPT, (ii) Perception of the Ease of Use of ChatGPT, (iii) Attitude towards the Use of ChatGPT, (iv) Intention to Use ChatGPT, (v) Perception of ChatGPT's Credibility and (vi) Perception of Social Influence.

2. Literature Review

Multidisciplinary technological approaches in higher education are essential as they encourage interdisciplinary collaboration, enhance critical thinking and problem-solving abilities, align with the needs of the digital age, and drive innovation and creativity [22]. The process of obtaining information and ideas regarding learning tasks is made easier by using artificial intelligence applications. The use of various AI applications in various sectors is growing as among them is the ChatGPT Chatbot that can mimic conversational interactions between humans [2] to get the desired source of information. Fütterer *et al.,* [8] declared ChatGPT as an intelligent learning partner. This suggests that ChatGPT can drive changes in learning goals, learning activities and assessment practices [3] in Malaysia education system. Teachers in the age of artificial intelligence now need to learn and keep pace with students' ability to use generative AI applications such as ChatGPT in order to assess and guide the validity of resources, ensure ethical use of information sources and foster critical thinking among students [8]. Critical thinking is a process that requires individuals to think in making decisions rationally based on information, evidence and experience [9].

Next, there are several studies and articles that show the advantages of the application of ChatGPT in education. The finding of the Montenegro-Rueda *et al.,* [7] study shows that the implementation of ChatGPT in an educational environment has a positive impact on the teaching and learning process and states the importance of training teachers to use the AI application properly. Despite its potential to enhance educational skills, its effective application requires teachers to be proficient in using it [7]. Suggestions and examples are essential to help educators develop the literacy needed to guide students towards the ethical and responsible use of AI [11].

The research conducted by Elbanna and Armstrong [5] concludes that ChatGPT can be integrated into education to carry out routine tasks and enhance student learning experiences. However, Elbanna and Armstrong [5] also caution that inconsistent facts, a lack of deep understanding, and safety concerns need to be addressed, even with updated versions of ChatGPT. This means that the use of AI applications can facilitate students' activities or assignments, but relevant assessments of the information and ideas obtained from ChatGPT must be carried out.

Based on a study by Gill *et al.,* [2], it was also stated that although Chat GPT has the ability to help educators build instructional content, offer suggestions and act as an online informant to students by answering the questions given, there are drawbacks to using ChatGPT such as the possibility of inaccurate or fake data and can prevent content plagiarism detectors. Therefore, guidelines on the use of AI applications are necessary to ensure that their use is beneficial in

education. Educational institutions can mitigate the impact of these technological disruptions and promote academic integrity by developing clear policies and guidelines [6]. In this regard, it is very important to understand the level of perception of trainee teachers towards ChatGPT to help prospective teachers apply it either during their studies or when they have served in schools in the future.

3. Methodology

3.1 Methods

This study uses a quantitative research design, conducted through a survey method where data is collected to explore the perception of trainee teachers at the Malaysian Institute of Teacher Education towards artificial intelligence (Ai) based on Chatbot ChatGPT. The survey method allows data to be collected not only for descriptive purposes but also for examining variables at the time the research is conducted [12]. The survey method is also highly suitable especially for the purpose of interpretation and identification as it provides respondents the opportunity to select answers that best suits their perception. The data collection process was carried out using a questionnaire form created with Google Forms and distributed online to the study sample.

3.2 Location, Sampling, and Study Respondents

This study was conducted at the Malaysian Institute of Teacher Education, Sarawak Campus, which is one of the higher education institutions that functions to produce competent and educator-spirited teachers through dynamic profesional development programs that align with world-class educational standards. A total of 194 people out of the total population of 390 trainee teachers were involved as respondents in this study. The number of respondents involved is based on a population-based sample size table by Krejcie and Morgan [14]. The sampling method of the study was simple random sampling.

3.3 Research Instruments

The research instrument is crucial in achieving the research study, as it determine whether the desired data and information are successfully obtained [15]. The questionnaire used in this study was adapted and modified from the questionnaire developed by Yilmaz *et al.,* [16]. The questionnaire were consists of two sections: the first section collects demographic information of the respondents while the second section explore their perception, which contained six dimensions, (i) Perception of the Usability or Benefits of ChatGPT, (ii) Perception of the Ease of Use of ChatGPT, (iii) Attitude Towards the Use of ChatGPT, (iv) Intention to Use ChatGPT, (v) Perception of ChatGPT's Credibility and (vi) Perception of Social Influence.

3.4 Validity and Reliability of Research Instruments

Validity and reliability refer to the stability and consistency of the instrument, ensuring that the items presented can be adequately answered by the sample [19]. Validity and reliability also refer to the consistency of a research tool to measure what it is intended to measure [17]. The reliability of the instrument was assessed using the Cronbach Alpha [18], with a reliability coefficient above 0.60 generally considered acceptable [15]. The score of a high reliability coefficient value ranges from 0.60 to 0.95 [19]. In this regard, a pilot study was conducted to determine the reliability of the study tools

in this study. The results of the pilot study indicated a high overall reliability index of 0.950. The Cronbach Alpha reliability index for each item in the aspect studied is as shown in Table 1.

Table 1
Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.950	0.953	18

3.5 Data Analysis Methods

The results of the questionnaire and the data collected were analyzed using IBM Statistical Package for the Social Sciences (SPSS) Statistics 21. Descriptive statistical analysis uses mean score interpretation to comprehensively unravel the question of the level of perception of trainee teachers at the Malaysian Institute of Teacher Education towards AI based on Chatbot: ChatGPT. Each mean score obtained was analyzed based on the interpretation of the mean score by Mohamad [20]. All mean score and standard deviations are rounded to two decimal points. The interpretation of the scores can be observed as shown in Table 2.

Table 2
Interpretation stage of the min score

Mean Score	Score Interpretation
1.00 – 2.33	Low
2.34 – 3.66	Moderate
3.67 – 5.00	High

4. Results

4.1 Perception Stage of Teacher Trainer

This section aims to discuss and present the findings of the study after the data has been collected and analysed. The discussion of the findings involved six dimensions to examine the level of perception of trainee teachers of the Malaysian Institute of Teacher Education towards artificial intelligence (AI) based on Chatbot: ChatGPT. The six dimensions are the perception of the usefulness or benefits of ChatGPT, the perception of the ease of use of ChatGPT, the attitude towards the use of ChatGPT, the intention to use ChatGPT, the perception of ChatGPT's credibility and the perception of social influence.

4.1.1 Perception of the usability or benefits of ChatGPT

Table 3 refers to the perception dimension item on the usefulness or benefits of ChatGPT which obtained an average score of 4.22 and a standard deviation of 0.77 which is at a high level. The highest-rated item was '*ChatGPT can help me find the information I need quickly and easily*' with a mean score of 4.49 and a standard deviation of 0.64. The second highest item was '*ChatGPT improves my ability to learn'* with a mean score of 4.10 and a standard deviation of 0.88. The item '*ChatGPT is a valuable source of information to answer my questions*' gave a mean score of 4.06 and a standard deviation of 0.79. The three items are at a high level of interpretation. These findings conclude that trainee teachers believe that ChatGPT can assist in obtaining information to enhance their learning.

Table 3
Dimension 1: Perception of the usability or benefits of ChatGPT

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	ChatGPT can help me find the information I need quickly and easily.	4.49	0.64	High
2	ChatGPT is a valuable source of information for answering my questions.	4.06	0.79	High
3	ChatGPT improved my ability to learn.	4.10	0.88	High
	Mean Average	**4.22**	**0.77**	**High**

4.1.2 Perception of the ease of use of ChatGPT

Based on Table 4, the perception dimension items for ChatGPT's usability are at a high level with an average score of 4.46 and a standard deviation of 0.64. The highest-rated item for this dimension was '*ChatGPT is easy to use'* with a mean score of 4.75 and a standard deviation of 0.49. The second highest item is '*ChatGPT a user-friendly tool'* with a mean score of 4.46 and a standard deviation of 0.64. The item '*ChatGPT is easy to get to do what I want it to do*' gives a mean score of 4.18 and a standard deviation of 0.80. These findings show that the three items are at a high level of interpretation. Therefore, it can be concluded that the trainee teachers have a positive perception, believing that AI application is easy to use, readily accessible, and user-friendly.

Table 4
Dimension 2: Perception of the ease of use of ChatGPT

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	ChatGPT is easy to use.	4.75	0.49	High
2	ChatGPT is easy to get to do what I want it to do.	4.18	0.80	High
3	ChatGPT is a user-friendly tool.	4.46	0.64	High
	Mean Average	**4.46**	**0.64**	**High**

4.1.3 Attitude towards the use of ChatGPT

Referring to Table 5, the attitude dimension items towards ChatGPT usage are at a high level with an average score of 4.12 and a standard deviation of 0.87. The highest item for this dimension was '*I find interacting with ChatGPT something interesting'* with a mean score of 4.14 and a standard deviation of 0.86. The second highest item is '*I like using ChatGPT'* with a mean score of 4.11 and a standard deviation of 0.87. The item '*Using ChatGPT is fun*' gives a mean score of 4.10 and a standard deviation of 0.88. The analysis of these findings shows that the three items are at a high stage of interpretation. Overall, the high mean score indicates that trainee teachers love and enjoy using the ChatGPT application, making it a useful technological tool in education.

Table 5
Dimension 3: Attitudes towards the use of ChatGPT

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	I love using ChatGPT.	4.11	0.87	High
2	Using ChatGPT is fun.	4.10	0.88	High
3	I found that interacting with ChatGPT was something interesting.	4.14	0.86	High
	Mean Average	**4.12**	**0.87**	**High**

4.1.4 Desire to use ChatGPT

Table 6 refers to the intent dimension item using ChatGPT which obtained an average score of 3.97 and a standard deviation of 0.94 which is at a high level. The highest-rated item for this dimension was '*I intend to use ChatGPT in the future*' item with a mean score of 4.24 and a standard deviation of 0.81. The second highest item was '*I expect to use ChatGPT more often in the future than now'* with a mean score of 3.84 and a standard deviation of 0.98. The item '*I plan to use ChatGPT frequently in the future'* gave a mean score of 3.82 and a standard deviation of 1.03. Thus, it was found that all three items were at a high level of interpretation. Overall, the high average mean score indicates that trainee teachers intend to apply AI at any time to assist in the teaching and learning process.

Table 6
Dimension 4: Passion for using ChatGPT

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	I intend to use ChatGPT in the future.	4.24	0.81	High
2	I plan to use ChatGPT regularly in the future.	3.82	1.03	High
3	I expect to use ChatGPT more often in the future than I do now.	3.84	0.98	High
	Mean Average	**3.97**	**0.94**	**High**

4.1.5 Perception of ChatGPT's credibility

The findings of the study in Table 7 show that respondents have less trust in the credibility of ChatGPT. In this dimension, all items obtained a moderate level of interpretation with an average mean score of 3.34 and a standard deviation of 0.91. The item '*ChatGPT is a reliable source of information*' obtained a mean score of 3.35 and a standard deviation value of 0.90. The item '*I consider ChatGPT to be a reliable source*' obtained a mean score of 3.34 and a standard deviation value of 0.93. The item '*I believe that ChatGPT provides accurate information*' shows a mean score of 3.32 and a standard deviation value of 0.90. All three items obtained a moderate level of interpretation. Therefore, it can be concluded that trainee teachers are still uncertain about the credibility and ability of ChatGPT in providing accurate and reliable information.

Table 7
Dimension 5: Perception of ChatGPT's credibility

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	ChatGPT is a reliable source of information.	3.35	0.90	Moderate
2	I believe that ChatGPT provides accurate information.	3.32	0.90	Moderate
3	I consider ChatGPT to be a reliable source.	3.34	0.93	Moderate
	Mean Average	**3.34**	**0.91**	**Moderate**

4.1.6 Perception of social influence

Table 8, refers to the dimension of perception of social influence, explaining that the highest-rated item was '*I believe that using ChatGPT is socially acceptable*' with a mean score of 4.04 and a standard deviation of 0.80. The item '*My peers think I should use ChatGPT'* obtained a mean score of

4.01 and a standard deviation of 0.90. While the item '*I was encouraged by others to use ChatGPT*' obtained a mean score of 4.00 and a standard deviation of 0.96. Based on the findings of the study, all items are rated highly, with a mean score of 4.02 and a standard deviation of 0.89. These results prove that trainee teachers agree and believe in the social acceptability of ChatGPT, making it as an AI application that can be used in education.

Table 8
Dimension 6: Perception of social influence

Item No.	Item Statement	Mean	Standard Deviation	Mean Level
1	My peers think that I should use ChatGPT.	4.01	0.90	High
2	I believe that using ChatGPT is socially acceptable.	4.04	0.80	High
3	I was encouraged by others to use ChatGPT.	4.00	0.96	High
	Mean Average	**4.02**	**0.89**	**High**

4.1.7 MITE trainer teacher's perception formulation of Artificial Intelligence (AI) Chatbot: ChatGPT

Table 9
MITE trainer teacher's perception formulation of Artificial Intelligence (AI) Chatbot: ChatGPT

Dimension	Item No.	Item Statement	Mean	Standard Deviation	Mean Level
Perception of the Usability or Benefits of ChatGPT	1	ChatGPT can help me find the information I need quickly and easily.	4.49	0.64	High
	2	ChatGPT is a valuable source of information for answering my questions.	4.06	0.79	High
	3	ChatGPT improved my ability to learn.	4.10	0.88	High
Perception of the Ease of Use of ChatGPT	1	ChatGPT is easy to use.	4.75	0.49	High
	2	ChatGPT is easy to get to do what I want it to do.	4.18	0.80	High
	3	ChatGPT is a user-friendly tool.	4.46	0.64	High
Attitude Towards the Use of ChatGPT	1	I love using ChatGPT.	4.11	0.87	High
	2	Using ChatGPT is fun.	4.10	0.88	High
	3	I found that interacting with ChatGPT was something interesting.	4.14	0.86	High
Desire to Use ChatGPT	1	I intend to use ChatGPT in the future.	4.24	0.81	High
	2	I plan to use ChatGPT regularly in the future.	3.82	1.03	High
	3	I expect to use ChatGPT more often in the future than I do now.	3.84	0.98	High
Perception of ChatGPT's Credibility	1	ChatGPT is a reliable source of information.	3.35	0.90	Moderate
	2	I believe that ChatGPT provides accurate information.	3.32	0.90	Moderate
	3	I consider ChatGPT to be a reliable source.	3.34	0.93	Moderate
Perception of Social Influence	1	My peers think that I should use ChatGPT.	4.01	0.90	High
	2	I believe that using ChatGPT is socially acceptable.	4.04	0.80	High
	3	I was encouraged by others to use ChatGPT.	4.00	0.96	High
	Mean Average		**4.02**	**0.84**	**High**

Table 9 summarizes the overall findings from the analysis of the level of perception of MITE trainee teachers towards artificial intelligence (AI) Chatbot: ChatGPT which is at a high level with a mean score of 4.02 and a standard deviation of 0.84. Based on the summary of these findings, it was also found that trainee teachers have a less positive acceptance of the dimension related to the credibility of ChatGPT as a reliable source of information. These findings are in line with the opinion of Iqbal *et al.,* [21] who revealed that educators in general, have a negative attitude towards ChatGPT due to concerns about its potential to facilitate academic dishonesty and promote laziness among students. However, the overall results also show that trainee teachers have a positive perception of the use and benefits of ChatGPT.

5. Study Limitations

As with other research works, this study also has several limitations. These limitations are as follows:

5.1 Scope of the Study Limitations

This study focuses solely on exploring the perceptions of trainee teachers at the MITE Sarawak Campus regarding ChatGPT, involving six dimensions, using a questionnaire instrument adapted and modified from the one developed by Yilmaz *et al.,* [16]. The scope of this study is limited to exploring perceptions based on only these six dimensions from the instrument. These dimensions are: (i) Perception of the Usefulness or Benefits of ChatGPT, (ii) Perception of the Ease of Use of ChatGPT, (iii) Attitude Towards the Use of ChatGPT, (iv) Intention to Use ChatGPT, (v) Perception of the Credibility of ChatGPT, and (vi) Perception of Social Influence.

5.2 Location Limitations of the Study

The location of this study is limited to MITE Sarawak Campus, which is one of the four teacher training institutes located in the state of Sarawak, Malaysia. Therefore, the findings of this study cannot be generalized to the entire MITE in Malaysia, as the location is restricted to MITE Sarawak Campus.

5.3 Limitations of the Study Population and Respondents

The study population consists of 390 trainee teachers at MITE, Sarawak Campus. Only 194 out of the total population of 390 trainee teachers participated as respondents in the study, based on the sample size determination table by Krejcie and Morgan [14].

5.4 Limitations of the Data Results

All data and information were fully obtained through the cooperation and honesty of the respondents in completing the online questionnaire. The results of this study are based solely on the questionnaires completed by the respondents. The respondents' understanding when answering the questionnaire is beyond the control of the researcher. If there is any misinterpretation of the questionnaire items by the respondents, it may affect the conclusions or results that are drawn. The findings of the study are entirely based on the analysis of the mean values of the feedback from the respondents, as collected from the questionnaires distributed to the respondents selected through

simple random sampling. Therefore, the findings of this study are only applicable to the study population at MITE, Sarawak Campus.

6. Conclusions

In conclusion, the findings of this study reveal that the level of perception of trainee teachers of the Malaysian Institute of Teacher Education Sarawak Campus towards Chatbot-based artificial intelligence (AI): ChatGPT, is at a high level based on overall results of the six-dimensional analysis focused on the study. Five dimensions that show a high level of perception are: perception of the usefulness or benefits of ChatGPT, perception of the ease of use of ChatGPT, attitude towards the use of ChatGPT, intention to use ChatGPT, and perception of social influence. However, the dimension related to the perception of the potential and credibility of ChatGPT as a tool for accurate and reliable information is at a moderate level. These findings are align with a study by Gill *et al.,* [2] which explained the weaknesses of using ChatGPT such as the possibility of inaccurate or fake data and its ability to bypass plagiarism detectors. As a result, a recommendation for further research based on the limitations of this study, is the development of a framework and guidelines for the use of ChatGPT. This would serve to enhance its potential and credibility as a technological tool for sourcing reliable information, ensuring that its use in education is both effective and beneficial. According to Ngo [26], barriers related to the quality and reliability of sources obtained from ChatGPT can be addressed by providing usage guidelines and promoting academic integrity to ensure the ethical use of ChatGPT in the academic context. This view is also in line with the opinion of Puthiyedath [24], who states that usage guidelines for ChatGPT can help maintain academic integrity, foster responsible digital citizenship, and ensure that AI technology is used to complement, rather than replace, students' own efforts. Through this study, the management and lecturers at MITE can plan the implementation of various in-house training sessions, workshops, talks, and seminars on the use of ChatGPT and how to effectively integrate it into teaching and learning practices. In addition, further studies related to this study may involve a larger sample sizes and include all Malaysian Institute of Teacher Education across Malaysia. This is due to the fact that the study is limited to the study sample at MITE, Sarawak Campus. Furthermore, more detailed research related to ChatGPT in education is essential and should be conducted using various other research approaches. Finally, further exploration of the potential, benefits, and challenges of AI technologies such as ChatGPT in futuristic learning-based education should be understood and studied.

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