In-service Teachers' Views on the use of Artificial Intelligence for Teaching Practices

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Abstract. Artificial Intelligence technology is quickly advancing during this decade, significantly impacting our education system, particularly the instruction of English as a foreign language. In the realm of EFL instruction, AI offers several advantages for vocational high school (VHS) teachers, prompting the researcher to investigate how these educators view and embrace AI for their pedagogical objectives. A case study is utilised to gain a comprehensive insight of how VHS teachers accept and are willing to apply AI through a semi-structured interview. Six participants, comprising public and private vocational high school teachers, were interviewed to obtain detailed perceptions regarding the perceived utility and simplicity of use of Artificial IntelligenceThe data indicate that VHS educators perceive the use of AI as enhancing their speed and efficiency, influenced by perceived usefulness (PU) and perceived ease of use (PEOU). However. they also continue to have challenges in incorporating AI into their instruction, including internet accessibility, a reluctance to utilise AI, and the compatibility of AI with their teaching practices. Despite recognising the utility of AI in their teaching, they remain hesitant to include it into their classes due to the necessity of acquiring professional proficiency in its application. The contributions are elaborated upon further.

Keywords: Artificial Intelligence, In-service teachers, , Vocational High School, views.

1. RESEARCH BACKGROUND

Over the past few decades, technology has been advancing rapidly, impacting every aspect of our everyday life, and in education, is not something that could be the exception. It also has had a significant impact on the way education is carried out. Artificial intelligence (AI) is a technological advancement that has the potential to revolutionize traditional teaching methods and significantly contribute to the advancement of several SDGs related to Quality Education (SDGs 4) by improving access to quality education by providing personalized learning experiences tailored to individual students' needs, abilities, and learning styles; Reduced Inequalities (SDG 10) by reducing inequalities in educational opportunities through personalized support and resources for students with diverse learning needs and backgrounds; and Partnerships for the Goals (SDG 17) through collaborative partnerships between academia.

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The field of AI has become a disruptive force in many areas, including education. The utilization of AI in the domain of education, albeit restricted, has been on the rise in recent years, namely for the purpose of acquiring a second or foreign language (L2) (Dizon, 2020; Moussalli & Cardoso, 2020). This is likely a result of the constraints faced by L2 courses, including limited instructional time and inadequate opportunities for skills; listening, speaking, speaking, and writing; development in a relaxed setting (de Vries et al., 2015; Tai & Chen, 2020). AI holds numerous important roles for the teaching and learning process and its components in education, so the potential of AI for learners' present and future is very significant (Mahmoud, 2020). Another compelling reason why AI is crucial for EFL instruction is the inherent difficulty faced by teachers in providing feedback to each student in a sizable class including more than 20 pupils (Luo, 2016). AI technology offers a promising answer to these difficulties by offering learners abundant opportunity for practice, free from significant pressure from teachers and peers, and with personalized and timely feedback (Dizon, 2017; Moussalli & Cardoso, 2020). That is why Eltabakh (2019) said that taking advantage of applying AI to design the curriculum, assessing the students, and finding new teaching methods is certainly unavoidable.

Although AI plays a crucial role in education, especially seeing the extensive use of it and the great potential that comes with it, AI may not assure the quality of teaching and learning process, also for teachers' ability to use it in the classroom, due to the teachers may not be fully ready and prepared to use it in the classroom. The worry of the teachers about the new utilization of technology may hold them back from using AI (Hébert et al., 2021; Tallvid, 2016), particularly in EFL teaching and learning, making it essential to prioritize the participants' perception as it serves as a key indicator of the effectiveness of AI-based instruction. However, the lack of appropriate information or findings in earlier studies can be attributed to the limited number of participants, which raises concerns about the trustworthiness of the study. AI has the potential to transform conventional teaching methods and improve student outcomes in the field of EFL. This makes teachers' readiness for AI usage important (Wang et al., 2023). Hence, this study aims to narrow the divide by examining the viewpoints of both pre- and in-service teachers about AI-based training. By including a larger number of participants, the study aims to obtain more reliable and trustworthy findings.

2. LITERATURE REVIEW

2.1. Artificial Intelligence

Over the past few decades, artificial intelligence (AI) has developed quickly and affected a number of industries, including healthcare, finance, education, and transportation. AI is described as a machine's ability to mimic thoughtful human behavior (McCarthy, 2007). Machine learning (ML), deep learning (DL), natural language processing (NLP), and robotics are the fundamental components of artificial intelligence (AI), and they are all involved in the process of making computers "smart".

AI Evolution The 1950s brought the development of symbolic AI, in which robots were given clear rules to follow in order to make judgments. But a big change came

with the advent of machine learning in the 1990s. Without explicit programming, computers can learn from data thanks to machine learning. Image identification, audio processing, and autonomous driving have all advanced thanks to deep learning, a subset of machine learning (ML) that makes use of neural networks with several layers (LeCun et al., 2015).

2.2. Acceptance and Willingness

The concept of "acceptance" has been extensively studied in the context of technology adoption. Davis (1989) introduced the Technology Acceptance Model (TAM), which postulates that an individual's intention to adopt and use new technology is influenced by two primary factors: perceived usefulness and perceived ease of use. This model has been applied extensively in studies of consumer behavior, e-learning systems, and digital healthcare tools. Building upon TAM, Venkatesh et al. (2003) developed the Unified Theory of Acceptance and Use of Technology (UTAUT), which incorporates additional constructs like social influence and facilitating conditions.

However, Ajzen's (1991) theory of Planned Behavior (TPB) is one behavior change theory that frequently informs the study of willingness. TPB states that behavioral intention, which is shaped by attitudes, subjective norms, and perceived behavioral control, is intimately related to willingness. This approach has been applied to a number of domains, such as environmental behaviors (willingness to embrace sustainable practices) and health behaviors (willingness to engage in preventive health measures). Although acceptance and willingness are both essential to comprehending behavioral adoption, there are significant differences between the two. Willingness indicates an active desire or readiness to engage in a specific action or embrace a technology while acceptance is frequently perceived as a more passive sort of agreement or compliance.

2.3. EFL In-Service Teachers

Professionals who are actively teaching while pursuing additional education or training to improve their abilities are known as in-service teachers. In-service teachers are in charge of students' learning outcomes and have finished formal teacher education, in contrast to pre-service teachers, who are preparing to become educators. Day (1999) elucidates that in-service education is a continuous process for educators, entailing engagement in endeavors that cultivate individual and occupational development. This covers ongoing language competency improvement in addition to pedagogical training for EFL in-service teachers.

When teaching EFL, in-service teachers frequently work in a country where English is not the primary language, which means they must balance teaching and learning languages at the same time. To improve their language proficiency and pedagogical approaches, these educators frequently partake in ongoing professional development. EFL in-service teachers deal with a range of issues, such as language competency, classroom management, and curriculum expectations. Despite having received training in communicative language teaching (CLT), a lot of EFL teachers may find it difficult to put these techniques into practice in settings with little funding or in big class sizes.

3. METHODOLOGY

3.1. Design

The current research aims to examine in-service teachers' acceptance and willingness to utilise Artificial Intelligence (AI) for instructional purposes; thus, a Case Study was employed to collect comprehensive information regarding teachers' acceptance and readiness to integrate AI into their classroom practices. The design aligns with the research objective as it examines occurrences in their real context to acquire detailed information regarding the study's purpose. This study examines the perceptions of in-service teachers regarding their teaching practices, offering detailed insights into the integration and valuation of AI, hence providing a clear representation from the field. This research exclusively concentrates on the specific educational tier of senior high school (SIH), rendering it distinctive in terms of the data collected.

3.2. Participants

The participants in the current study consisted of six in-service vocational high school English teachers who had incorporated AI into their teaching techniques. The participants were intentionally chosen to fulfil the research purpose about the acceptance and desire to integrate Artificial Intelligence (AI) in their classes, based on the frequency of AI usage, as well as age, gender, and consent. We obtained the participants' consent before conducting the semi-structured interviews for data collection.

3.3. Data Collection

This study employed semi-structured interviews as the method for data collection from participants, addressing two aspects: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), modified from Davis, 1989. Each participant was interviewed for 5-10 minutes to obtain information regarding the proposed aspects and their readiness to use AI into their educational activities. Participants are requested to furnish comprehensive and detailed information regarding their behavioural changes resulting from the integration of AI in their teaching practices. The interview giude is presented as follows:

Table 1. Interview guidelines on technology acceptance adopted from David, 1989

No	Aspects	Key points	Questions
1	Perceived Usefulness (PU)	Work more quickly	How does AI (any types) help you to work faster?
		Job performance	Do you think you work faster when using AI? Explain or illustrate!

		Increase productivity	Do you think you are more productive when working using AI?
		Effectiveness	Do you think your work is more effective/save more time/get things done faster when working using AI?
		Makes Job Easier	Does AI help you with a difficult task/job?
		Useful	Does AI work very well for your teaching activity?
2	Perceived Ease of Use (PEOU)	Easy to learn	have you got difficulties in the integration of AI
		Clear and understandable	do you think using (a name of AI) is clear and understandable?
		Easy to become skilful	Is operating AI (a name of AI) difficult or is it easy to be skilful on it?
		Easy to use - Controllable	Can you use the AI (a name) easily?
		Flexible	Is the AI flexible enough for your teaching activities?

3.4. Data Analysis

The result of the interview was in the form of video recording which is then transcribed into texts. The acquired narrative data were investigated by thematic analysis, employing open coding to classify participants' responses according to the preset dimensions of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). The researcher categorises the responses according to the dimension and eliminates all extraneous answers. The coding was executed to categorise the closely linked responses according to specific themes based on specified characteristics. then The resuls are reported.

4. FINDING AND DISCUSSION

This section presents the the result of the interview with the participants which are reported based on the preset dimension discussed above. The data are the excerpts which represent the Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), as follows:

" ...To me, using ChatGpt is very helpful and make my work easier because I only copy and paste the result or the answers of the prompt I write in the

ChatGpt platform. After knowing how easy it is to use ChatGpt and get the answer, I get addicted of using it again and again..." **T1**

" ...using AI, indeed, makes everything more efficient and, for sure, is helpful..." **T2**

The excerpts of T1 and T2 indicate that these participants posses a favourable disposition towards the utilisation of the Artificial Intelligence (AI), ChatGPT, as they believe it enhances their efficiency in completing tasks. The extracts suggest that they are inclined to utilise AI for their future endeavours due to their addiction. The finding aligns with Zhang, Schibebl, Hofman, and Zikuda (2023), who discovered that both pre-service and in-service teachers possess a favourable opinion of AI-based educational applications for their teaching methods. Davis (1989) asserted that Perceived Usefulness and Perceived Ease of Use are the drivers of instructors' desire to integrate AI into their classrooms. According to T1, The AI not only assists them in their professions, but also enhances their productivity, as one of the participants said:

" ...the ChatGpt makes me more productive in terms of time spending on one work. I think it cuts down the time spending to write a lesson plan which usually take more time to work on. But ChatGpt makes working on the lesson plan a lot shorter, and I can use my remaining time for other activity at school"

From the excerpt, it can be inferred that once completing his work on one task, he utilises his time to attend to other responsibilities. It elucidates that AI enhances time efficiency, hence reducing the duration spent on a single activity and allowing for the allocation of time to other pressing responsibilities, resulting in increased productivity for the teacher. This statement is in line with Wang, Y., Liu, C., & Tu, Y.-F. (2021) who found that PU and PEOU are the dominant factors of AI integration for the educational purposes which is believed that the AI integration decrease the workload of the teachers. The result of this research is in favour with previous research which explains that the 5 out 6 participants are more productive; which is one of the PU aspects.

In contrast to T1 and T2, T3 likely contests the notion that AI enhances her productivity, as she must verify the outputs of ChatGPT, Gemini.ai, and Canva, which she believes requires additional time for validation. She believes that incorrect propmts invariably yield erroneous and incompatible responses. These disadvantages compel her to cease utilising AI in her teaching activities. She has confidence in her own work without reliance on AI, yet she somewhat believes in reducing expenditure on her efforts. Yao and Huang (2024) discovered that educators may possess a favourable perspective of AI utilisation in classrooms; yet, they also encounter challenges that could impede their readiness to adopt AI. As the participant stated:

" *... I realized that I see a lot of incompatibilities, maybe from the incomplete prompts. Well then again, the level is too high for children. So then I chose this one. The benefits in terms of the time needed are shorter (faster), the disadvantage is that children cannot understand language which is too high..."*

T4 appears to share a similar perspective regarding the drawbacks of utilising AI in language classrooms. The participant need considerable time to become acquainted with ChatGpt, Gamma.ai, and Magic School.ai and their functionalities for educational purposes. It is crucial to provide precise and detailed prompts to obtain optimal responses, as AI relies on a database of information sourced from the internet. Vague prompts provide inaccurate responses from the AI. This study aligns with Yao and Huang (2024), who identified that unfamiliarity with AI technology among educators impedes their productivity. Prior to integrating AI into the classroom, educators must familiarise themselves with the technology to enhance their students' learning experience.. As the excerpt reported:

" ....those AIs anyway are easy to use, but less familiar with them will make the result less accurate. Learning how to make good prompts is somewhat an issue for teacher, especially the ones who are not good enough about technology, for isntance AI

T5 asserted that the utilisation of AI is advantageous for the planning and implementation phases. The participant indicated that the AI assisted her in developing an improved teaching plan. The participant demonstrated a keen interest in utilising AI for educational applications, since it facilitates the creation of interesting activities that stimulate student learning. She further elucidated that utilising AI expedites the planning and execution of actions. Conversely, she believes she is unwilling to utilise other form of AIs if she becomes accustomed to a certain one. AI provides many promising benefits for EFL teachers to use, not only in the preparation phase but also in asessing the students work. As stated by Lou (2016)A further significant rationale for the importance of AI in EFL instruction is the inherent challenge teachers encounter in delivering feedback to each student in a large class over 20 pupils). As the excerpt reported:

" ..AI helps me a lot for the preparation and implementation of my teaching. When I used AI, it seems that I can teach better because I do not have to spend much time in preparing the materialand I can focus more on my students and help them with any issues. The AI, anyway, helps me to overcome the problem. I can create more engaging teaching activities which triggers the students to be more active and creative. In that sense, I can say that the presence of AI in

language teaching is very beneficial and I believe every teacher should make use of it for teaching purposes. I think I will continue utilising AI in my teaching practices..."

Unlike T5, T6 may have difficulties in integrating AI into her teaching methodologies. The participant asserted that she lacks sufficient creativity to formulate a prompt due to her inability to keep pace with technology or AI effectively. She may hold a favourable view of AI's application in language classrooms, although she lacks the capability to implement it in her own teaching practice. This is in line with Gamboa (2022) who stated that senior citizen English teachers might have less capability with modern gadgets, but they are still willing to learn. The co-junior teachers help them with the issue but it might take quite sometime to be able to utilise technology. As the excerpt says:

" I am an old-fashion teacher, I wonder how my students work on their assignments so fast. I might not be good about AI when it comes to create a good prfompts which can give me a good result and match with my expectation. Although it is difficult for me but I believe it can speed up my work.

5. CONCLUSION

In conclusion, AI has shown to be a useful tool for teachers, especially when it comes to creating lesson plans and teaching materials. AI helps teachers focus more on the creative and instructional parts of teaching by automating repetitive chores, which ultimately saves time and effort. Nevertheless, even with AI's increased efficiency, teachers still need to actively refine and modify AI-generated content to match the unique requirements and language skills of their pupils, making sure the information is relevant and understandable. Every tool has advantages and disadvantages, so educators must choose which platform best fits their unique teaching requirements. Nonetheless, a frequently seen issue is the discrepancy between the prompts sent into the AI and the outcomes generated. Teachers frequently have to put in more work to change and refine the output, which can offset some of the time-saving advantages AI first seems to offer.

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