THE FUTURE OF LESSON PLANNING: AI INTEGRATION EXPERIENCES AMONG TESL TEACHER TRAINEES IN A MALAYSIAN PUBLIC UNIVERSITY

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Published: 23 December 2024

To cite this article (APA): Kussin, H. @ J., Megat Khalid, P. Z., Chaniago, R. H., Moneyam, S., & Hassim, H. E. (2024). The future of lesson planning: AI integration experiences among TESL teacher trainees in a Malaysian public university. *AJELP: Asian Journal of English Language and Pedagogy*, *12*(2), 178–189. https://doi.org/10.37134/ajelp.vol12.2.13.2024

Abstract: This study examines TESL students' perceptions of the incorporation of Artificial Intelligence into lesson planning. This study also identifies the AI tools selected by TESL teacher trainees for lesson plan development. This study involved thirty TESL undergraduate students and five teacher trainees from a Malaysian public university. This research employed a descriptive case study methodology, incorporating semi-structured interviews with teacher trainees and a questionnaire administered to TESL students. The data gather from interviews were transcribed and analysed thematically, while the questionnaire data were tabulated. The research findings have clear implications for participants who conveyed favourable views on AI integration in lesson planning. Two themes emerged from the interview: the Utilization of Diverse AI Tools and the Customization and Adaptation of AI-Generated Content. Significantly, ChatGPT and Magic School AI emerged as favoured selections among the participants. These findings substantially enhance the efficiency of lesson planning, accelerate idea generation, and simplify the overall process. This study suggests that educational practitioners must adopt artificial intelligence (AI) in lesson plan development, given its increasing acceptance and advantages.

Keywords: Artificial Intelligence, chatGPT, magic school AI

INTRODUCTION

AI is now becoming an essential part of classroom and learning life, which presents opportunities and problems. AI integration into learning extends beyond the pedagogical use to include personalised learning experiences and enhanced administrative assistance, and will invariably alter the interactions between educators and students throughout education. As AI innovations grow, their potential to transform education systems is growing, making the following connections to how teaching practices need to be reformed particularly urgent.

The most significant contribution of AI to education is its capacity to deliver flexible and individualised learning. This technology adapts educational materials to the needs and learning styles of each individual student, which can greatly increase student learning and outcomes. Customised learning pathways also allow the student to progress at their own pace, and this provides for a more fulfilling and effective learning experience (Lee, 2023; Zawacki-Richter et al., 2019; Alshumaimeri & Alshememry, 2024). This flexibility within AI systems both caters to achievers and low performers, providing every student with a chance to perform well.

In addition to individualized learning, AI-powered intelligent tutoring systems have become a game-changer in the educational arena. They provide instant feedback and assistance, allowing the students to understand complex topics and improve their abilities in an equivalent way to individual tuition. This sort of universal education also facilitates customised assistance that can fill in gaps in learning, which is particularly helpful in settings where personal attention from teachers might be scarce (Zawacki-Richter et al., 2019; Ifenthaler & Schumacher, 2023). By emulating the personal approach of a teacher, AI platforms revolutionise education access so that all students can master challenging content.

Additionally, AI also enhances the efficiency of administration processes at colleges by simplifying a multitude of activities, including grading, assessments, and admissions. By automating these processes, educators have fewer hours in the day, which frees them to spend more time educating and engaging students. Thus, the efficiency of education systems increases resulting in better learning conditions and experiences (Ahmad et al., 2022). This re-use of time and resources can free teachers to use more creative teaching techniques that bring more value to student learning and interest, rather than monotonous bureaucratic tasks.

AI is especially helpful in language education, helping learners to learn languages through immersive experiences. AI tools are able to deliver instant feedback and tailor their responses to the level of proficiency of the learner, thereby making language acquisition more efficient and enjoyable (Alshumaimeri & Alshememry, 2024; Cantos et al., 2023). Through this type of dialogue, students can become confident in their own language skills and get the individualized help needed to improve their performance, thereby retaining and using the language.

AI's role in education encourages humans and machines to co-operate in a way that AI can augment rather than take over human work. This combination could promote effective pedagogy and better learning because instructors can exploit AI data-processing abilities and harness human insight and creativity (Ifenthaler & Schumacher, 2023; Crescenzi-Lanna, 2022). As educators adjust to this new world, the combination of AI's accuracy and human intuition promises promising ways to improve the quality and efficiency of learning.

In this rapidly changing world of education, AI clearly has immense potential to change the way that we teach and learn. Through its potential to deliver tailored, adaptive experiences, help with the use of intelligent tutoring platforms, optimize administrative work, and boost

language acquisition, AI promises to transform the way we learn. When learning continues to embrace AI, ongoing research and development will be essential to make sense of the implications and best use its applications for learners and teachers.

LITERATURE REVIEW

AI in lesson development

AI has made great contributions in lesson design to create personalized, fast and engaging learning for children. Integrating AI in education relies on sophisticated algorithms and large amounts of data to facilitate learning processes in multiple ways. AI is adjusting the way teachers teach — to make content specific to each child's needs, to automate lesson planning and to change the teaching methodology. This technological revolution presents enormous opportunity for teaching and learning, especially for graduate trainees studying Teaching English as a Second Language (TESL), where student-centredness and responsiveness are crucial.

Personalised learning is one of the main advantages of AI in lesson design. AI algorithms mine tons of student information – their performance history, learning styles, and classroom dynamics – to tailor-make the curriculum for them. This personalisation not only increases the levels of engagement, but also greatly improves academic performance by providing students with material that is timely, appropriate and tailored to their individual learning preferences (Ejjami, 2024; Tian, 2024; Zouhri & Mallahi, 2024). A grammar-troubled student, for example, might get additional practise and materials for grammar and those with better skills might receive more challenging materials. The individualization also facilitates a truly inclusive learning community where nobody feels isolated and every learner can become their best (Zouhri & Mallahi, 2024).

Beyond individualized learning, AI can also automate the lesson scheduling. Generic AI (ChatGPT) allows you to create lesson plans and content based on your specific needs and goals. They can deliver comprehensive, well-organized lesson plans for a wide variety of classrooms in short order, saving teachers time (Kehoe, 2023; Van Den Berg & Du Plessis, 2023; Alali, 2024). For instance, instead of hours of writing a lesson plan from scratch, a teacher can simply enter their curriculum objectives and get an overall outline with activities, quizzes, and suggested resources. Automating planning also allows teachers to focus on other important activities – like connecting with students and generating productive classroom conversations.

Second, AI-based systems can significantly contribute to enhanced learning by providing adaptive tests and real-time feedback. They make use of data analytics to spot knowledge inefficiencies and act on it instantly, giving teachers the ability to intervene quickly and boost learning. Interactive assessment systems allow teachers to measure student learning and make instructional changes in real time, making it more flexible (Ejjami, 2024; Tian, 2024). So, for example, if a large number of students are unable to grasp a concept in a lesson, AI can alert the teacher to recommend special intervention or different learning modes. This ability creates a continuous exchange of information between the learner and teacher to provide specific instruction.

Live, immersive learning is also another important product of AI adoption in education. When paired with augmented reality (AR) and virtual reality (VR), AI delivers dynamic, responsive learning environments that react to the interactions of students on a time-dependent basis. AR software can, for instance, project digital material onto the real world, exposing children to complex ideas through simulations and interactive learning games (Cano & Troya, 2023; Zouhri & Mallahi, 2024). This type of immersion doesn't just help with understanding

and retention but also enables more intimate interaction with the content. When they're engaged in learning as learners rather than passive recipients, students are more likely to stay engaged and curious.

However, even with all these advantages, AI as part of lesson design brings a series of difficulties and concerns that need to be faced by teachers and institutions. The main concern concerns data privacy and ethics related to the use of student data. AI's role in the classroom is a source of concern for algorithmic discrimination and equitable participation, and it requires monitoring with great care and a robust moral regime (Ejjami, 2024; Tian, 2024; Zouhri & Mallahi, 2024). For example, making sure that AI tools don't repeat educational disparities will require algorithms to be rigorously checked and audited for bias. In addition, the schools and institutions need to have clear data privacy guidelines to keep the data safe and secure, making it a safer environment for the students and parents.

And teachers, even with the aid of AI machines, are still needed. Such technological changes might greatly benefit lesson planning and teaching, but they cannot replace the fundamental human nature that professional teachers bring to the classroom. Pedagogues need to supplement AI-driven material with their knowledge, human compassion and cultural knowledge to make informed teaching choices that speak to their students (Kehoe, 2023; Van Den Berg & Du Plessis, 2023). AI, for instance, can provide a wealth of teaching materials, but not an eye for the affective and social dimensions of a classroom. Thus, the teacher's ability to read these dynamics and shape their behaviour is still a key component of the positive, productive school climate.

Recognising all these aspects, the application of AI in implementing lessons has a vast amount of promise for transforming teaching. The combination of a 1:1 learning experience, automatic lesson plans, adaptive assessments, and immersive learning gives teachers the ability to develop rich, flexible lessons that accommodate multiple students' needs. But the successful adoption of AI in the classroom will require careful consideration, making sure ethics and teachers' hard-won contribution remain top of mind at every step. If we manage those issues carefully, we can allow schools to leverage the capability of AI to further education and yet retain the human dimension. The current study seeks to understand whether TESL students have similarly positive perception about the use of artificial intelligence (AI) in their discipline. Furthermore, the study aims to determine what are their favourite AI tools and applications. The study aims to bridge the existing gap in understanding the preferences and perceptions of pre-service teachers with TESL background concerning AI tools, focusing on their role in lesson planning. Below are the research questions that the study aims to address:

1) What are the perceptions of TESL students when it comes to integrating AI in developing lesson plans?
2) Which AI do TESL students choose when it comes to developing lesson plans?

Emergence of AI tools for lesson development in education

Artificial intelligence (AI) continues to be embraced in the education domain, especially with lesson plan writing. Such high-tech tools can help teachers by allowing them to eliminate redundant tasks and enable them to concentrate on connecting with students and making learning fun. AI tools can also create, analyze and restructure educational materials to drastically simplify the lesson design. As more teachers embrace these technologies, it is important to find out how students from TESL perceive AI integration into the teaching of English.

A useful AI resource that creates lesson plans, *ChatGPT*, is one of the most powerful AI tools available. *ChatGPT* not only helps teachers plan lessons more effectively but also

saves them time as well and helps you overcome the challenges teachers face in the classroom. Kehoe (2023) and Van Den Berg & Du Plessis (2023) argued that it offers specific resources and supports that make lesson plans accessible so that any teacher (beginner or professional) can create high-quality teaching. *ChatGPT* is very helpful for composing content and giving accurate answers and has become a popular tool for teachers. But it's important that teachers should be cautious, and look carefully at the results, to minimise the potential biases or discrepancies (Da Silva & Ulbricht, 2023; Motlagh et al, 2023). The tool, for example, has been widely used in other disciplines including science, to help create instructional practices and learning paths (Lee & Zai, 2024). Such capabilities could lead TESL students to find *ChatGPT* highly interesting, while they might also be suspicious of the authenticity and veracity of AI generated content.

In the same way, *Google Bard* can be another useful AI tool for lesson planning with the capability to create interactive and dynamic content. Based on real-time internet statistics, *Bard* updates lesson plans to reflect current information (Wangsa et al., 2024). *Bard's* distinctive attributes, like its Text-To-Speech and integration with Google Workspace, enable access and inclusion in schools (Da Silva & Ulbricht, 2023). These benefits can cause TESL students to recognise the tool's capabilities but it is important to understand that performance isn't always consistent. Teachers might need to provide additional commentary or modifications so that the resulting lesson plans have sufficient quality and relevance (Wangsa et al., 2024). What TESL students think about Bard and the alternatives may provide valuable information on which AI to use in the teaching.

Additionally, *Lesson Plan AI* is fully integrated for building planned lesson plans in a variety of subject areas, so it's especially useful for teachers who want a simple method of planning lessons. With their outline and tasks, *Lesson Plan AI* allows for teachers to be more efficient in lesson planning, as seen by using it to plan an 8th grade computer science lesson (Boneva & Garov, 2024). Since educators are already torn between a multitude of tasks, the ease and speed of *Lesson Plan AI* might appeal to people searching for effective ways to develop full lesson plans with minimum work. What TESL students think about this tool could help us determine whether its ease of use affects how they plan lessons.

A further main force here is *BgGPT*, widely used in computer science teaching. With its useful tool for preparing lesson plans and tasks, *BgGPT* is especially helpful for subject teachers (Boneva & Garov, 2024). By concentrating on different learning situations, *BgGPT* offers a personalised experience to educators based on their own specific requirements and interests. Knowing TESL students' response to *BgGPT's* narrow focus could help us to learn more about their perceptions of AI tools tailored to their specific field of study.

Despite the importance of all the tools mentioned above, there are some other AI products like *Magic School AI* that also offers automated lesson plans and other instructional content. Although not explicitly discussed in prior research, tools of this sort help instructors develop meaningful and successful lesson plans by providing templates and topic ideas. This automated support signals an evolving trend within education to use technology to more effectively build lessons so that educators can focus on teaching, rather than logistics.

Since AI tools have revolutionised lesson plans by creating content that is specific to learners, easily accessible and time-saving, it's important to understand the views of TESL students. Hence, the study is conducted because it is believed that their views on these technologies will shape not just how AI is used in instruction, but also which tool they use to plan lessons. Answering questions like: How do TESL students feel about using AI to create lesson plans? And what AI do TESL students use when they write their lesson plans? are key to understanding how AI is effective and adopted in education. This analysis can enable educators to see how AI might inform future teaching practices so that those advances truly serve the students and teachers.

METHODOLOGY

This study was a mixed-methods study to reach a detailed knowledge of the phenomenon being studied through both quantitative and qualitative approaches (Perez, 2023). The quantitative element was a survey instrument (likert scale) designed to ask TESL students their thoughts on using Artificial Intelligence (AI) in the classroom. The data were then processed with descriptive statistics (Harris & Brown, 2019). In parallel, qualitative results were gathered through interviews, where thematic analysis was used to look for themes and patterns associated with the experience of the participants (LeCompte & Schensul, 2016). There were 30 participants recruited, using convenience sampling, from TESL undergraduates who had completed their first teaching practicum and the sample was representative of the study context (Simkus, 2022).

The data-collection tools and methods were clearly defined. This survey instrument was used to measure how TESL students experience, perceive, and integrate AI in lesson design. More detailed qualitative feedback was collected through interview rounds using WhatsApp VoiceCall with ethical guidelines (including audio-recording for precision) (Harris & Brown, 2019). The data analysis procedure was well explained including use of descriptive statistics for survey data and thematic analysis for interview data. The data was thoroughly processed, including an initial pilot study, data cleaning and survey participation, to help ensure that findings were reliable and valid. This methodological design is a strong starting point for getting valuable data on how TESL students felt about AI being integrated into lesson design, opening the door for future work in this critical area.

Table 1: Perceptions Regarding the Integration of Artificial Intelligence into Development of Lesson Plans

NO.	STATEMENTS	Perception of integration Artificial Intelligence Cumulative Frequency (Percentage %)				
		1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
1	Integrating Artificial Intelligence helps in producing lesson plans.			6 (20.7%)	12 (41.4%)	11 (37.9%)
2	Integrating Artificial Intelligence into preparing lesson plans helps reduce time.	1 (3.3%)	2 (6.7%)	3 (10%)	14 (46.7%)	10 (33.3%)
3	Integrating Artificial Intelligence into preparing lesson plan helps generate idea faster.		1 (3.3%)	2 (6.7%)	13 (43.3%)	14 (46.7%)
4	Artificial Intelligence is the future of education.	1 (3.3%)	1 (3.3%)	8 (26.7%)	5 (16.7%)	15 (50%)
5	Integrating Artificial Intelligence into preparing lesson plans helps make the process of preparing lesson plans easier.		2 (6.7%)	3 (10%)	12 (40%)	13 (43.3%)
6	Integrating Artificial intelligence into preparing lesson plans helps in personalizing the lesson plans.	1 (3.3%)	2 (6.7%)	5 (16.7%)	10 (33.3%)	12 (40%)
7	Integrating Artificial intelligence into preparing lesson plans helps in preparing for lessons.	2 (6.7%)	1 (3.3%)	7 (23.3%)	11 (36.7%)	9 (30%)

continued

NO.	STATEMENTS	Perception of integration Artificial Intelligence Cumulative Frequency (Percentage %)				
		1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
8	Integrating Artificial intelligence into preparing lesson plans brings innovation to the development of lesson plans.		1 (3.3%)	6 (20%)	13 (43.3%)	10 (33.3%)
9	Integrating Artificial intelligence into preparing lesson plans allows for customization in tailoring lesson plans to individual student needs.		1 (3.3%)	6 (20%)	10 (33.3%)	13 (43.3%)
10	Integrating Artificial intelligence into preparing lesson plans helps pre-service teachers in effectively planning for lessons.			6 (20%)	14 (46.7%)	10 (33.3%)
11	Integrating Artificial intelligence into preparing lesson plans is a relevant practice.		2 (6.7%)	5 (16.7%)	11 (36.7%)	12 (40%)
12	The integration of Artificial Intelligence in lesson planning is a beneficial practice enhance the education experiences.		2 (6.7%)	6 (20%)	10 (33.3%)	12 (40%)
13	Integrating Artificial intelligence into preparing lesson plans is an essential aspect of practice to stay updated with modern teaching practices.		2 (6.7%)	7 (23.3%)	10 (33.3%)	11 (36.7%)
14	Integrating Artificial intelligence into preparing lesson plans plays a crucial role in adapting to the evolving landscape of language education.		1 (3.3%)	5 (16.7%)	12 (40%)	12 (40%)
15	Integrating Artificial Intelligence into preparing lesson plans improves pre-service teachers' efficiency in preparing lesson plans.		1 (3.3%)	5 (16.7%)	14 (46.7%)	9 (30%)

FINDINGS

Perceptions regarding the integration of artificial intelligence into development of lesson plans

Data on how teachers would consider implementing Artificial Intelligence (AI) in lesson planning gives us an excellent indication of educators' perceptions of this emerging technology. Each assertion gives a distinctive perspective on AI in education, an array of ideas to inform how we can use these ideas to create new deployments and teacher training.

Beginning with "Using Artificial Intelligence to create lesson plans" there is a strong bias towards using AI. Of these, 12 (41.4%) agree and 11 (37.9%) strongly agree — which would translate into 79.3% of participants indicating that AI is a positive thing for lesson plan creation. Only 6 respondents (20.7%) were neutral – a very visible preference for AI's utility in this regard.

The second – "Building AI into lesson planning saves time" – is another mostly positive statement. Of the others, 14 (46.7%) and 10 (33.3%) strongly concur, resulting in an aggregate of 80% who consider time efficiency to be a real advantage. This is in comparison with a small number of 3 respondents who disagreed (10%) indicating overwhelming agreement that AI can improve the way lessons are prepared.

The third point, "When you use Artificial Intelligence when creating lesson plans, you get ideas quicker," exhibits a similarly high-minded attitude toward speed and efficiency. Overall, 91% – 13 (43.3%) – and 14 (46.7%) strongly agreed that AI plays a positive role in lesson planning creativity and ideation. This ties in nicely with what we've said about time saving and efficiency.

The quote "Artificial Intelligence is the future of education" indicates unabashed hope. A total of 15 (50%) strongly agreed and 2 (6.7%) disapproved, a high confidence in the transforming power of AI in educational systems, although 8 respondents (26.7%) were neutral, suggesting that they are uncertain or conflicted about the timeline for that change.

Second, the "Additional AI to lesson plan creation helps make things easier" answer also generates positive responses, with 12 (40%) and 13 (43.3%) very strongly agreeing. This echos earlier comments on AI as an enabler to remove obstacles from lesson-making, demonstrating a general acceptance for its simplicity.

As for the personalization part, 10 (33.3%) agree, and 12 (40%) strongly agree on the statement "Adding AI to plan lessons enhances the ability to customize lesson plans", giving a result of 73.3% that consider AI a critical tool for personalizing content to fit the needs of students. On the other hand, the number of neutral responses at 5 (16.7%) suggests that some educators aren't sure or confident about AI's personalization power.

For the perceived benefit of AI in lesson planning (for example: "Integrating Artificial Intelligence into preparing lesson plans helps to prepare for lessons"), 9 (30%) strongly agree, 11 (36.7%) agree and 66.7% believe that AI can be used for lesson planning. This indicates an authentic use of AI for enhancing the teaching experience.

Likewise, for "Bringing innovation to lesson plan creation by integrating Artificial Intelligence" 13 (43.3%) agrees and 10 (33.3%) strongly agrees, a 75.67% vote increase for innovation by AI integration.

Regarding flexibly for students, the statement "How implementing AI into lesson plan generation provides the opportunity for flexibility in meeting the needs of specific students" received favorable response (10 (33.3%) and 13 (43.3%) strongly agree. The figure of 76.6% indicates that AI is likely to be seen as beneficial for meeting the learning needs of individuals, though they still need to be more communicated about this aspect.

As for whether AI is useful in the teaching of pre-service teachers, as it is stated, there is a strong consensus that the majority who believe that AI plays an important role in lesson planning consist of a neutral (6/20%) and majority (14/46.7%) agreement on this point, with an average of 80 per cent supporting AI's value.

Statements on the importance and value of AI integration – like "Applying Artificial Intelligence to prepare lesson plans is a useful practice" or "An application of Artificial Intelligence to prepare lesson plans is a valuable practice" – display a decent level of agreement, but also neutrality. For both cases, large numbers (36.7% for the first, 40%) nodded, indicating a tentative optimism about incorporating AI into lesson planning methods.

Finally, the overall answer to the sentence "Lesson plans that incorporate Artificial Intelligence are essential in meeting the needs of language teaching" shows that AI's versatility is strongly supported (40 per cent) and 40% (40 per cent) by a large majority. This congruous total underlines the significance of revising teaching practice to meet 21st-century needs.

Overall, responses show an overwhelming preference for implementing AI into lesson planning, citing efficiency, convenience, creativity and personalisation as benefits. Yet, such

neutral responses in different phrases suggest that more training and understanding of what AI can do could help teachers embrace these tools.

Choice of AI in developing lesson plans

The exploration of TESL students' AI preferences when creating lesson plans provided rich tool preferences and illuminating patterns reflecting their specific ways of using technology to support teaching. Using thematic analysis, a variety of AI services emerged, including popular ones such as ChatGPT, ChatPDF, Magicschool.ai, Quillbot, and Consensus AI. This breadth of resources highlights the layered approach students take to accommodate their particular requirements and teach contexts. For example, as one participant explained: "I use ChatGPT for creating conversation starters to allow for interactive lesson planning, but Magicschool.ai is the place to go for resources that are tailored to the purpose of my lessons." This reflects a thoughtful use of technology to make learning more engaging for students and deliver learning goals.

What's more, students' interactions with these AI tools demonstrated a strong preference for customization. Participants explained how they themselves worked to shape the AI-generated content in ways that better matched their own learning goals and their students' needs. As one participant told me: "I often adapt the ideas Quillbot generates to my teaching approach and my students' interest. 'It's not just taking what the AI tool does, but bending it for me.' In this context, this activity promotes an individual and imaginative use of AI where students don't simply take what the AI tool does, but retool and tweak it in order to make it meaningful and useful for the classroom. Such personalization also entails greater knowledge of teaching techniques and dedication to creating an engaging learning environment.

This appreciation of AI's diverse contribution to lesson planning could be seen particularly clearly in the participants' feedback. Many emphasised the insights and learning materials that tools such as ChatGPT and Magicschool.ai provided in their planning efforts. One student, for example, wrote, "ChatGPT has been a great tool to think of curriculum themes when I need inspiration and magicschool.ai has offered some amazing multimodal learning projects that fit with what my students are interested in". These stories beautifully describe how AI technologies can be not only assistive technologies, but also colleagues in education planning.

All in all, these findings capture the informed and varied decisions TESL students make when they employ AI as part of their lesson planning. The conclusion here is that students are dealing judiciously with educational tech, attempting a hybrid of personalization and recognition of how useful AI is in helping facilitate the lesson planning process. As one participant summed it up, "AI is not replacing my imagination; it's enhancing it." Such a perspective represents a progressive attitude towards learning where technology and teaching work together to give hope to future teachers and improve the experience they build for them. This work opens opportunities to explore further how these technology tools can be harnessed for more efficacious ways to improve TESL and other pedagogical practices.

CONCLUSION AND DISCUSSION

This research tells a compelling story of how TESL students use artificial intelligence (AI) to plan their lessons: hopeful, but also complicated, because the technology is so complicated. First, TESL students' overwhelmingly high levels of acceptance and optimism towards AI as a form of education show that the trend is positive. Since a large percentage said that AI would save them time and improve their productivity, these budding educators surely are sensing that AI can cut the time needed for lesson planning. It is also in line with what is already known

about AI as delivering customized learning experiences and administrative services to maximise learning outcomes (Lee, 2023; Zawacki-Richter et al., 2019).

Furthermore, the range of preferences for different AI devices indicates that TESL students are not only flexible with using technology for teaching, but also selective in choosing tools that are best suited to their teaching practice. This kind of pedagogical use of platforms such as ChatGPT and Magicschool.ai reflects a forward-thinking use of technology for personalized learning plans for students. Participants described how these devices let them think quickly and imaginatively, reaffirming the idea that AI is capable of complementing, not replacing, the humans in teaching. Its results were in line with prior claims that AI is changing education through increasing the individualisation of learning and providing opportunities for collaboration in learning (Alshumaimeri & Alshememry, 2024; Ejjami, 2024).

The implications for teacher-training programs are interesting in light of the results. The dim hopes respondents had for AI's personalisation capability suggest that educators could use professional development to better grasp what these technologies can and cannot do. A targeted programme can help to promote more trust in AI and counter any doubts about its application to learning. Moreover, as most participants are neutral about some of AI's potential, perhaps schools can create workshops and training sessions that unpack AI, present best practices to use it and give the participants a good grasp of ethics issues such as data privacy and algorithmic bias (Ejjami, 2024; Tian, 2024).

Furthermore, even if participants' enthusiasm for AI solutions such as ChatGPT and Magicschool.ai is an indication of an openness to technological education, critical engagement with AI-generated output still remains. The results speak to the need to marry AI's data-processing skills with educators' human intelligence and innovation to create an integrated learning environment (Ifenthaler & Schumacher, 2023; Crescenzi-Lanna, 2022). This synthesis of technology and human learning promises better ways to teach and learn, something particularly important for language education where context and personal touch are key.

Lastly, the research will add to the general conversation about the use of AI in education, especially in TESL. This study highlights what the views and needs of first-year teachers are regarding AI tools and use cases, and adds new insights into how emerging technologies can be utilised to aid teaching and learning. Other future research might build on these by looking at the impact of these instruments on student learning, and what educators think of AI integration in the long term. In the end, when education landscape continues to change with the development of AI, a moderation that puts ethics, teacher education and student orientation front and centre will be needed to bring the most out of AI in education.

IMPLICATIONS OF STUDY

The way that TESL students think about using artificial intelligence in lesson planning offers a subtle picture of the role technology plays in their own teaching. According to the research, TESL students tend to perceive AI as a strength rather than a simple task-easiness tool. Students, for example, found that AI can also help them be more creative and efficient, enabling them to devote their time to instructional planning instead of getting tangled up in administrative duties. This optimistic message holds a powerful point for teacher education programmes to bring AI and its potential applications into their teaching. In this way, teacher education can help create a culture of innovation and flexibility in future teachers who can adapt and survive the increasingly technology-based classroom. Additionally, because AI's views resemble a growth mindset, schools can also provide workshops to help students gain more knowledge and practice around using AI devices, ultimately forming a more informed and capable generation of teachers.

Additionally, students' decisions about what AI tool to use for TESL reveals important aspects of their preferences and functionalities. Our inclination towards multiple tools (ChatGPT, Magicschool.ai, Quillbot, etc) highlight the necessity of utility, usability, and versatility in teaching planning. Each tool has its own unique functions that cover different areas of lesson creation from the creation of content to the creative use of teaching approaches. Such diversity implies that we should encourage educators to try out different AI solutions to see which best matches their pedagogical style and goals. Therefore, the potential for education technology developers to develop more customised and accessible AI devices for the needs of TESL students and teachers in general should be taken into consideration. Knowledge about the motivation behind these decisions could also guide future AI tool design, to ensure that they will be useful for dynamic teaching and learning settings. Teachers and colleges could also provide spaces where TESL students can exchange experiences about how to use AI tools with each other, and thus build a community of practice that fosters continuous professional development and collaborative learning in the process of using AI as part of lesson plans.

REFERENCES

Ahmad, S., Alam, M., Rahmat, M., Mubarik, M., & Hyder, S. (2022). Academic and administrative role of artificial intelligence in education. *Sustainability*. https://doi.org/10.3390/su14031101.

Alali, R., Wardat, Y., Al-Saud, K., & Alhayek, K. (2024). Generative AI in education: Best practices for successful implementation. *International Journal of Religion*. https://doi.org/10.61707/pkwb8402.

Alshumaimeri, Y., & Alshememry, A. (2024). The extent of ai applications in efl learning and teaching. *IEEE Transactions on Learning Technologies*, 17, 653-663. https://doi.org/10.1109/TLT.2023.3322128.

Boneva, R., & Garov, K. (2024). Introduction to artificial intelligence and its application in creating lesson plans. *Education and Technologies Journal*. https://doi.org/10.26883/2010.242.6200

Cano, C., & Troya, A. (2023). Artificial intelligence applied to teaching and learning processes. *LatIA*. https://doi.org/10.62486/latia20232.

Cantos, K., Giler, R., & Magayanes, I. (2023). Artificial intelligence in language teaching and learning. *Ciencia Latina Revista Científica Multidisciplinar*. https://doi.org/10.37811/cl_rcm.v7i4.7368.

Crescenzi-Lanna, L. (2022). Literature review of the reciprocal value of artificial and human intelligence in early childhood education. *Journal of Research on Technology in Education*, 55, 21 - 33. https://doi.org/10.1080/15391523.2022.2128480.

Da Silva, G., & Ulbricht, V. (2023). Chatgpt and bard in education: A comparative review. In p*roceedings of the 20th international conference on cognition and exploratory learning in the digital age (celda 2023)* (pp. xx-xx). https://doi.org/10.33965/celda2023_202306l045

Ejjami, R. (2024). The future of learning: AI-Based curriculum development. *International Journal For Multidisciplinary Research*. https://doi.org/10.36948/ijfmr.2024.v06i04.24441.

Ifenthaler, D., & Schumacher, C. (2023). Reciprocal issues of artificial and human intelligence in education. *Journal of Research on Technology in Education*, 55, 1 - 6. https://doi.org/10.1080/15391523.2022.2154511.

Kehoe, F. (2023). Leveraging generative ai tools for enhanced lesson planning in initial teacher education at post primary. *Irish Journal of Technology Enhanced Learning*. https://doi.org/10.22554/ijtel.v7i2.124.

Kshirsagar, P., Jagannadham, D., Alqahtani, H., Naveed, Q., Islam, S., Thangamani, M., & Dejene, M. (2022). Human intelligence analysis through perception of ai in teaching and learning. *Computational Intelligence and Neuroscience*, 2022. https://doi.org/10.1155/2022/9160727.

Lee, G., & Zhai, X. (2024). Using chatGPT for science learning: A study on pre-service teachers' lesson planning. *IEEE Transactions on Learning Technologies*, 17, 1683-1700. https://doi.org/10.1109/TLT.2024.3401457.

Lee, S. (2023). Otherwise than teaching by artificial intelligence. *Journal of Philosophy of Education*. https://doi.org/10.1093/jopedu/qhad019.

Motlagh, N., Khajavi, M., Sharifi, A., & Ahmadi, M. (2023). The impact of artificial intelligence on the evolution of digital education: A comparative study of openai text generation tools including chatgpt, bing chat, bard, and ernie. *ArXiv*, abs/2309.02029. https://doi.org/10.48550/arXiv.2309.02029.

Salas-Pilco, S., Xiao, K., & Hu, X. (2022). Artificial intelligence and learning analytics in teacher education: A systematic review. *Education Sciences*. https://doi.org/10.3390/educsci12080569.

Tian, Y. (2024). Empowering college physical education: ai-driven training, teaching, and intelligent information processing. *Molecular & Cellular Biomechanics*. https://doi.org/10.62617/mcb.v21i1.327.

Van Den Berg, G., & Du Plessis, E. (2023). chatgpt and generative ai: Possibilities for its contribution to lesson planning, critical thinking and openness in teacher education. *Education Sciences*. https://doi.org/10.3390/educsci13100998.

Van Den Berg, G., & Du Plessis, E. (2023). Chatgpt and generative ai: Possibilities for its contribution to lesson planning, critical thinking and openness in teacher education. *Education Sciences*. https://doi.org/10.3390/educsci13100998.

Wangsa, K., Karim, S., Gide, E., & Elkhodr, M. (2024). A systematic review and comprehensive analysis of pioneering ai chatbot models from education to healthcare: chatgpt, bard, llama, ernie and grok. *Future Internet*, 16, 219. https://doi.org/10.3390/fi16070219.

Zawacki-Richter, O., Marín, V., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators?. *International Journal of Educational Technology in Higher Education*, 16. https://doi.org/10.1186/s41239-019-0171-0.

Zouhri, A., & Mallahi, E. (2024). Improving teaching using artificial intelligence and augmented reality. *Journal of Automation, Mobile Robotics and Intelligent Systems*, 18, 57 - 61. https://doi.org/10.14313/jamris/2-2024/13.