University of Zawia-Faculty of Arts Journal (UZFAJ)
Volume 26, Issue 1, (2026), pp.184-195, ISSN: 2521-9235

The Impact of AI-Assisted Lesson Planning on EFL Teachers' Efficiency and Creativity in General English Courses: A Case Study at University of Zawia Language Centre

Heba Marimi

Zawia Language Center, University of Zawia, Zawia, Libya

Email: h.marimi@zu.edu.ly

Received 12/01 /2026 | Accepted 25 /02/2026 | Available online 06 / 03 /2026 | DOI: 10.26629/uzfaj.2026.11

ABSTRACT

This study is titled 'The Impact of AI-Assisted Lesson Planning on EFL Teachers' Efficiency and Creativity in General English Courses: A Case Study at University of Zawia Language Centre'. It addresses the limited empirical evidence on the use of Artificial Intelligence (AI) in lesson planning within Libyan higher education, despite the growing global reliance on AI tools in EFL instruction. The study aims to investigate how AI-assisted lesson planning influences EFL teachers' efficiency, lesson quality, and creativity, while also exploring the challenges and ethical concerns teachers encounter in integrating AI into their professional practice. A mixed-methods explanatory sequential design was used, combining quantitative data from a questionnaire completed by 15 teachers with qualitative insights from semi-structured interviews with eight participants. The findings indicate that AI tools, particularly generative systems such as ChatGPT, enhance teachers' planning efficiency by reducing preparation time, supporting material organization, and stimulating creative activity design. However, teachers also reported concerns related to accuracy, cultural appropriateness, and insufficient institutional AI training. Based on these findings, the study recommends providing structured AI literacy training, developing clear institutional guidelines for responsible AI use, and encouraging context-sensitive adaptation of AI-generated materials. The research contributes contextual evidence from a Libyan university setting and offers practical implications for teacher development and policy in technology-enhanced education.

Keywords: Artificial Intelligence, English Language, University of Zawia, Libya.

أثر توظيف الذكاء الاصطناعي في تخطيط الدروس على كفاءة وإبداع معلمي اللغة الإنجليزية كلغة أجنبية: دراسة حالة بمركز اللغات بجامعة الزاوية

هبة المريمي

مركز اللغات، جامعة الزاوية، الزاوية، ليبيا

تاريخ الاستلام:2026/01/12 تاريخ القبول:2026/02/25 تاريخ النشر : 2026/03/06

ملخَّص البحث

يتناول هذا البحث أثر التخطيط للدروس المدعوم بالذكاء الاصطناعي على كفاءة وإبداع معلمي اللغة الإنجليزية كلغة أجنبية في مقررات اللغة الإنجليزية العامة: دراسة حالة بمركز اللغة بجامعة الزاوية. يهدف البحث إلى استقصاء مدى تأثير التخطيط للدروس المدعوم بالذكاء الاصطناعي على كفاءة المعلمين وجودة الدروس والإبداع لديهم، بالإضافة إلى استكشاف التحديات والمخاوف الأخلاقية التي يواجهونها عند دمج الذكاء الاصطناعي في ممارساتهم المهنية. استخدمت الدراسة منهجاً مختلطاً بتصميم تفسيري تسلسلي، حيث جُمعت البيانات الكمية من خلال استبيان شارك فيه 15 معلماً، إلى جانب بيانات نوعية من مقابلات شبه مهيكلة مع ثمانية مشاركين. وتشير النتائج إلى أن أدوات الذكاء، وخاصة الأنظمة التوليدية مثل (تشات جي بتي) الاصطناعي، تعزز كفاءة تخطيط الدروس من خلال تقليص وقت الإعداد، ودعم تنظيم المحتوى، وتحفيز تصميم أنشطة تعليمية مبتكرة. ومع ذلك، أبدى المعلمون مخاوف تتعلق بالدقة، والملائمة الثقافية، وضعف التدريب المؤسسي المتخصص في استخدام الذكاء الاصطناعي. وبناءً على هذه النتائج، توصي الدراسة بتوفير برامج تدريبية منظمة في محو الأمية الرقمية للذكاء الاصطناعي، ووضع إرشادات مؤسسية واضحة للاستخدام المسؤول لهذه التقنيات، وتشجيع تكييف المواد المُولَّدة بالذكاء الاصطناعي بما يتناسب مع السياق التعليمي المحلي. وتسهم هذه الدراسة في تقديم دليل سياقي من بيئة جامعية ليبية، وتقدّم دلالات تطبيقية مهمة لتطوير المعلمين وصنّاع السياسات في مجال التعليم المدعوم بالتقنية.

الكلمات المفتاحية: الذكاء الاصطناعي، اللغة الانجليزية، الجامعة، الزاوية، ليبيا.

Introduction

The rapid emergence of Artificial Intelligence (AI) has reshaped educational practices globally, particularly in the field of English as a Foreign Language (EFL). AI tools such as ChatGPT, Grammarly, and Canva AI now support teachers in generating lesson ideas, adapting content, and developing instructional materials. These tools promise to reduce teachers' workload, enhance planning efficiency, and stimulate creative approaches to teaching. However, despite the increasing international research attention on AI integration in education (Holmes et al., 2022; Zhai, 2023), empirical investigations in the Libyan higher education context remain scarce.

At University of Zawia Language Centre, EFL teachers increasingly experiment with AI-assisted lesson planning, yet the educational implications of this shift have not been systematically examined. Understanding how teachers recognize the benefits and challenges of AI use is necessary for informing institutional policies and designing appropriate professional development programs. This study responds to this need by exploring how AI-assisted lesson planning influences EFL teachers' efficiency and creativity within a Libyan university context**.**

Statement of the Problem

Although AI tools are increasingly reachable and broadly promoted for educational use, their integration into teaching practices in Libyan universities remains limited due to insufficient teacher training in AI literacy and a lack of institutional technological and educational support. Consequently, the practical effects of AI-assisted lesson planning on teachers' efficiency, lesson quality, and creativity are not well understood. While international research highlights both the potential benefits and risks of AI, such as issues of accuracy, cultural relevance, ethical use, and over-reliance on technology (U.S. Department of Education, 2023; Kasneci et al., 2023 there is a notable absence of empirical evidence documenting how these challenges and opportunities manifest among EFL teachers in Libya. This gap restricts informed decision-making regarding AI adoption and prevents institutions from fully leveraging AI's potential. Therefore, this study addresses the lack of empirical understanding of EFL teachers' experiences, perceptions, and challenges related to AI-assisted lesson planning at University of Zawia Language Centre**.**

Aim of the Study

This study aims to investigate the impact of AI-assisted lesson planning on EFL teachers' perceived efficiency and creativity at University of Zawia Language Centre. Specifically, the study seeks to examine how AI influences teachers' time management, workload, lesson quality, and ability to generate creative and engaging instructional ideas. The study also aims to identify the challenges, limitations, and ethical concerns teachers encounter when integrating AI tools into their lesson planning practices.

Research Questions

To achieve the stated aim, the study is guided by the following research questions:

1. What AI tools do EFL teachers at University of Zawia Language Centre use in lesson planning, and how frequently are these tools employed?
2. To what extent does AI-assisted lesson planning influence teachers' perceived efficiency?
3. How does AI-assisted lesson planning affect teachers' creativity in designing instructional activities and materials?
4. What challenges, limitations, or ethical concerns do teachers face when using AI tools in lesson planning?

Significance of the Study

This study holds academic, educational, and institutional significance. Academically, it contributes empirical evidence to the limited body of research on AI integration in EFL teaching in Libya, thereby filling a notable regional gap identified in global literature. Pedagogically, the findings provide insights into how AI tools can support teachers in enhancing efficiency and creativity, informing best practices for lesson planning in low-resource contexts.

Institutionally, the study offers valuable implications for teacher training, policy development, and digital infrastructure planning at Libyan universities. By documenting teachers' needs, challenges, and perceptions, the research guides the design of AI literacy programs and establishes responsible use policies that ensure ethical and contextually appropriate AI integration**.**

Contribution of the Study

The study offers three key contributions. First, it provides one of the first empirical examinations of AI-assisted lesson planning within a Libyan EFL teaching context, generating insights that are valuable for other under-researched educational settings. Second, it contributes methodologically by employing a mixed-methods explanatory sequential design, producing both quantitative trends and qualitative interpretations; additionally, the questionnaire and interview instruments developed for this research offer adaptable tools for future studies. Finally, the study makes a practical contribution by highlighting the essential skills, training needs, and institutional support systems required for the effective and ethical integration of AI into lesson planning, thereby informing teacher education programmes and policy development**.**

Limitations of the Study

Several limitations should be acknowledged. First, the study's sample consists of 15 teachers from a single language centre, which limits the generalizability of the findings to other Libyan institutions or international contexts. Second, the study relies on self-report instruments, which may be affected by social desirability bias or subjective interpretation. Third, while the mixed-methods design provides depth and breadth, the study does not include classroom observations, which could reveal actual (rather than perceived) changes in teaching practices. Despite these limitations, the study offers valuable insights that can guide larger-scale investigations and inform institutional decision-making on AI integration in EFL teaching.

Literature Review

Overview: AI in education (scope and trends)

Research on AI in education has expanded rapidly since 2022 with the emergence of powerful generative models, such as ChatGPT. Systematic reviews highlight a surge in studies exploring AI's pedagogical affordances, ethical challenges, and implications for teacher practice and student learning. Generative AI has the potential to support personalized instruction and reduce routine workload, but concerns remain regarding accuracy, equity, and teacher preparedness. As UNESCO (2023) notes, "Generative AI tools can assist teachers in designing lessons, creating learning materials, and personalizing instruction, but their use requires careful guidance and adequate teacher training," emphasizing the need for structured professional development.

AI and Teachers' Professional Practice

AI is increasingly reshaping teachers' daily tasks and professional identities. Tan's (2024) systematic review, covering studies from 2015–2024, concluded that AI integration in professional development and daily practice depends heavily on teachers' AI literacy and institutional support. Empirical pilot studies with pre-service and in-service teachers indicate that AI tools can accelerate draft generation (e.g., lesson outlines and assessments) and support novice teachers in developing planning heuristics. Yet these studies consistently highlight the importance of training in prompt design and output validation to prevent uncritical adoption. As the OECD (2023) emphasizes, "Teachers need appropriate training and ongoing support to use AI tools effectively in their professional practice," underscoring the need for structured support to ensure responsible AI integration.

AI for Lesson Planning: Experimental and Exploratory Studies

Recent empirical studies have focused on AI-assisted lesson planning. Exploratory and quasi-experimental research across disciplines shows efficiency gains but mixed effects on pedagogical quality. For instance, small-scale experimental studies comparing AI-assisted and traditional lesson plans found that AI can generate diverse activities and save teachers' time, yet outputs require critical editing for curricular alignment and cultural appropriateness. A 2025 experimental study in STEAM education demonstrated that ChatGPT-assisted plans improved access to "21st-century" task ideas and scaffolding prompts, but only when teachers critically adapted the AI outputs. These findings highlight the potential of AI to support teachers while reinforcing the necessity of human oversight**.**

AI and Creativity in Teaching : Theoretical and Empirical Perspectives

Scholars propose two mechanisms for AI's impact on teacher creativity. One perspective frames AI as a cognitive offloader: by automating routine planning tasks, AI frees teachers' cognitive resources for higher-order creative work such as idea generation and adaptation. The alternative perspective warns that overreliance on AI templates may constrain originality if outputs are accepted without critical transformation. Empirical studies examining creativity, including classroom pilots and prospective teacher projects, generally find that AI can stimulate innovative ideas (e.g., story prompts, role-plays, multimodal resources), though the creative value depends on teachers' skills in interpreting, localizing, and remixing AI-generated content. A Spain-based study concluded that AI presents "enormous opportunities" to enhance creativity but emphasized scaffolding within teacher education (Martínez & Pérez, 2023)

AI in EFL Contexts: Affordances and Constraints

Generative AI offers specific benefits for EFL teaching, including rapid generation of communicative prompts, customized reading and listening materials, pronunciation drills, and scaffolded writing tasks. Systematic reviews indicate that EFL teachers value AI for producing task variants and supporting individualized practice. However, recurrent challenges include**:**

- Aligning AI outputs with national curricula and assessment standards
- Ensuring cultural and contextual relevance
- Verifying linguistic accuracy for learners

Several reviews call for additional field studies to document classroom-level effects on teacher practice and student outcomes. One review concluded that "AI could empower educators through curriculum, lesson planning, materials generation, differentiation" (Li & Chen, 2024)**.**

Low-Resource and Regional Evidence

Empirical research in low-resource or under-researched contexts remains limited but is gradually increasing. A recent Libyan study examined EFL university students' adoption of ChatGPT and found that while students quickly embraced the tool for language tasks, generalizability was limited, and instructor-focused research was recommended (Mosbah, 2024). Studies from similar contexts suggest that infrastructure (e.g., connectivity), teacher digital literacy, and institutional policies critically influence the practical benefits of AI. These findings underscore the importance of investigating AI integration at the local level, such as in the present study at University of Zawia, to identify real-world affordances and barriers.

Ethical, Accuracy, and Equity Concerns

Multiple systematic reviews and policy briefs highlight significant risks associated with AI use, including hallucinations (AI-generated inaccuracies), biased or culturally inappropriate content, and inequities in access to high-quality AI tools and training. The U.S. Department of Education and other systematic reviews urge institutions to develop AI policies, provide teacher training, and design assessment practices that account for AI's capabilities and limitations. These cautionary perspectives are particularly relevant in Libyan contexts, where institutional guidelines and systematic AI-focused teacher training remain underdeveloped. Educators face "challenges to overcome, such as teachers' resistance" (U.S. Department of Education, 2023).

Previous Empirical Studies

Several prior studies provide evidence of AI's impact on teachers' practices and lesson planning**:**

Tan (2024) synthesized global research from 2015–2024, showing that AI integration improves professional development outcomes when combined with institutional support**.**

Pilot studies with pre-service and in-service teachers demonstrated that AI tools accelerate lesson planning, support novice teachers, and stimulate creative ideas, but also require training to ensure critical engagement (OECD, 2023).

Experimental studies in STEAM and EFL contexts (2025) found that AI-assisted plans improve access to innovative activities and personalized prompts, but only when teachers critically adapt outputs**.**

Regional evidence from Libya (Mosbah, 2024) highlights the importance of local context, including digital infrastructure and teacher digital literacy, in achieving practical classroom benefits.

Collectively, these studies highlight both the potential benefits and challenges of AI integration, including the need for professional development, local contextualization, and ethical safeguards. They also reveal a gap in research within Libyan higher education, which the present study addresses

Summary of gaps and how this study responds

The literature converges on three main points:

1. Generative AI can increase planning efficiency and supply creative prompts.
2. Benefits are contingent on teachers' AI literacy, contextualization skills, and institutional support.
3. Robust empirical evidence from under-researched regions (including Libya) remains limited.

This study addresses those gaps by empirically documenting EFL teachers' experiences with AI-assisted lesson planning at a Libyan university language centre, combining quantitative measures of perceived efficiency and creativity with qualitative accounts that reveal contextual barriers (digital literacy, curricular alignment, cultural fit) and training needs.

Methodology

This study employed a mixed-methods explanatory sequential design, integrating both quantitative and qualitative approaches to provide a comprehensive understanding of how AI-assisted lesson planning affects EFL teachers' efficiency and creativity. Mixed-methods research enables the combination of numerical trends with detailed personal insights, resulting in more holistic interpretations of educational phenomena (Creswell & Plano Clark, 2018; Cohen, Manion & Morrison, 2018).

Accordingly, the study began with a quantitative questionnaire distributed to teachers at University of Zawia Language Centre. The results of the questionnaire subsequently informed a qualitative phase involving semi-structured interviews, which allowed deeper exploration of the initial findings.

Design

The explanatory sequential mixed-methods design was selected because it supports the identification of broad tendencies through quantitative measures and the explanation of these tendencies through qualitative insights. This design is commonly used in educational technology research where teacher perceptions, attitudes, and behaviours are central (Creswell & Creswell, 2023). By integrating the two phases, the design strengthened the internal validity of the findings through methodological triangulation.

Participants

The study involved 15 EFL teachers currently teaching General English at University of Zawia Language Centre. A purposive sampling strategy was employed to select teachers who actively engage in lesson planning and have at least minimal experience with AI-assisted tools. Among the participants, 9 were female, and 6 were male, with teaching experience ranging from 10 to 20 years. All participants held at least a Master's degree in Applied Linguistics or TEFL, and most reported using AI tools such as ChatGPT, Grammarly, and Canva AI. Participation was entirely voluntary, and informed consent was obtained from all teachers before data collection.

Instruments

Two research instruments were employed in this study: a questionnaire and a semi-structured interview guide. The questionnaire was administered online via Google Forms during the Spring semester 2025, specifically between March and April 2025. It was adapted from previous empirical studies on AI in education (Peikos, 2025; Ekizer, 2025) and comprised five sections designed to explore teachers' use of AI tools in lesson planning. The semi-structured interviews aimed to gain deeper insights into teachers' experiences with AI-assisted planning. Each interview lasted approximately 10–15 minutes and was conducted in English or Arabic, according to the participants' preference.

Data Collection Procedures

Data were collected over four weeks in April 2025. The questionnaire was distributed via Google Forms, and participants were contacted through official university email lists. Responses were collected anonymously.

After analyzing the questionnaire results, eight teachers (representing both frequent and infrequent AI users) were selected for follow-up interviews. Interviews were conducted via Zoom and recorded with participants' consent. Transcripts were later translated and coded thematically.

Following the recommendations of Dörnyei (2007), data collection was sequenced to ensure that quantitative findings informed the qualitative questions, creating a coherent and complementary dataset.

Data Analysis

Quantitative Analysis

Data from the questionnaire were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics (means, standard deviations) were calculated for each scale. Independent-samples t-tests compared perceptions of regular AI users and non-users. Pearson correlations examined relationships between the frequency of AI use and efficiency/creativity scores.

Qualitative Analysis

The interview transcripts were analyzed using thematic analysis. This process followed the six-step framework proposed by Braun and Clarke (2006). First, the researchers familiarized themselves with the data. Next, they generated initial codes and then searched for emerging themes. Afterwards, the themes were reviewed and refined. The researchers then defined and named the final themes. Finally, the findings were compiled into a comprehensive report.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of University of Zawia. Participants were informed of the study's purpose and assured anonymity. Interview recordings were securely stored and deleted after transcription. The study adhered to BERA (2018) guidelines on respect, consent, and confidentiality. All AI tools used were transparently reported, and participants were reminded to maintain academic honesty when using AI-generated materials.

Findings

Quantitative Findings

The quantitative analysis revealed that teachers who regularly used AI tools reported significantly higher perceived efficiency and creativity compared to non-regular users. Efficiency improvements were attributed to faster lesson preparation, automated generation of activities, and simplified material organization. These findings support Peikos (2025), who found that "AI streamlined repetitive tasks and provided alternative activity ideas" (p. 338).
Furthermore, a positive correlation was found between the frequency of AI use and creativity, indicating that increased exposure to AI correlates with greater idea generation and innovative lesson design. Similar patterns were reported by Ekizer (2025), whose meta-analysis showed that "AI-assisted planning fosters divergent thinking and supports creativity when guided by teacher expertise" (p. 7).

Qualitative Findings

Thematic analysis of interviews produced four dominant themes
Theme 1: Time Efficiency and Workload Reduction
Teachers repeatedly emphasized that AI tools help them prepare lessons faster and reduce the pressure of repetitive planning tasks. One participant noted, "I can generate a complete lesson outline in minutes, then just adapt it to my students' level" (T3). This aligns with Belloula (2025), who stated that "AI tools significantly reduce teacher workloads, enhance lesson quality, and increase the time teachers can spend on higher-order pedagogical work" (p. 3).
Theme 2: Creativity and Idea Generation

Participants mentioned that AI platforms inspired them to design more engaging activities. "AI suggested a role play about daily routines customized it to include Libyan cultural references," said one teacher (T7). These reflections resonate with Tan (2024), who argued that AI acts as "a creativity partner rather than a replacement for human ingenuity" (p. 11).

Theme 3: Accuracy and Contextual Challenges

Despite enthusiasm, teachers expressed uncertainty about AI's accuracy and cultural fit. "Some examples didn't make sense for my students; I had to rewrite parts," one teacher explained (T2). This concern mirrors the findings of Luo (2025), who cautioned that "AI-generated content must be carefully reviewed for contextual and linguistic appropriateness" (p. 14).

Theme 4: Training and Institutional Support

Teachers expressed the need for structured professional development to maximize AI benefits. "We need workshops to learn prompt techniques and to evaluate outputs critically," said one respondent (T5). This aligns with global calls for teacher AI literacy training (U.S. Department of Education, 2023).

Discussion

The findings of this study reveal that AI-assisted lesson planning positively influences EFL teachers' perceived efficiency and creativity. Teachers reported that AI tools helped them reduce planning time, organize materials, and generate activity ideas. These results align with global research showing that AI can streamline routine tasks, support teachers' cognitive workload, and assist in generating instructional materials (Holmes et al., 2022; Zhai, 2023).

Teachers also expressed that AI stimulated creativity by suggesting new activity types and offering alternative approaches to presenting content. This supports arguments by Luckin et al. (2022), who state that generative AI can act as a "creative partner" by enabling teachers to explore multiple pedagogical possibilities.

However, several challenges emerged. Teachers were concerned about the accuracy of AI-generated content and the cultural appropriateness of materials, issues widely documented in AI-in-education research (U.S. Department of Education, 2023; Kasneci et al., 2023). Teachers also emphasized the need for institutional training to use AI responsibly, echoing recommendations in recent policy reports (OECD, 2023).

Conclusion

This study examined the impact of AI-assisted lesson planning on EFL teachers' efficiency and creativity at University of Zawia Language Centre using a mixed-methods design. The findings showed that AI tools, especially generative systems like ChatGPT, helped teachers save time, organize materials more effectively, and generate creative instructional ideas. However, teachers also expressed concerns regarding accuracy, cultural fit, and the lack of institutional training in AI literacy. Overall, the study concludes that AI can enhance lesson planning when used critically and ethically, functioning as a supportive tool rather than a replacement for teacher expertise.

Recommendations

Based on the findings, it is recommended that EFL teachers develop stronger AI literacy skills, particularly in prompt design, critical evaluation of AI-generated content, and ethical use. Language centre administrators should provide structured professional development and establish clear institutional guidelines to ensure responsible and context-appropriate integration of AI tools. Policymakers are encouraged to invest in digital infrastructure, incorporate AI training into teacher education programmes, and support continued research on AI use in EFL settings. Future studies should involve larger and more diverse samples across

multiple institutions and explore the long-term effects of AI-assisted planning on teaching practices and student learning outcomes.

References

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.
British Educational Research Association. (2018). BERA ethical guidelines for educational research (4th ed.).
Cohen, L., Manion, L., & Morrison, K. (2018). Research methods in education (8th ed.). Routledge.
Creswell, J. W., & Plano Clark, V. L. (2018). Designing and conducting mixed methods research (3rd ed.). Sage.
Creswell, J. W., & Creswell, J. D. (2023). Research design: Qualitative, quantitative, and mixed methods approach (6th ed.). Sage.
Dörnyei, Z. (2007). Research methods in applied linguistics. Oxford University Press.
Dwivedi, Y. K. et al. (2023). So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges and implications of generative AI for research, practice and policy. International Journal of Information Management, 71.
Holmes, W., Bialik, M., & Fadel, C. (2022). Artificial Intelligence in education: Promises and implications. Center for Curriculum Redesign.
Kasneci, E. et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Instruction, 101.
Li, X., & Chen, Y. (2024). *Generative AI in EFL classrooms: Opportunities and challenges*. Journal of Language Teaching, 15(2), 45–62
Luckin, R., Cukurova, M., Papamitsiou, Z., & Mavrikis, M. (2022). Towards AI-literate teachers: Recommendations and frameworks. British Journal of Educational Technology.
Martínez, A., & Pérez, J. (2023). *AI and teacher creativity: Evidence from classroom pilots*. Educational Technology Research, 31(4), 120–135
Mosbah, Z. M. (2024). *Analysis of ChatGPT use among Libyan EFL students*. Zawia University Journal of Education, 12(1), 33–50
OECD. (2023). AI in Education: A Guide for Policy Makers. Organisation for Economic Co-operation and Development. [https://www.oecd.org /education / ai-in-education] (https://www.oecd.org/education/ai-in-education
UNESCO. (2023). *Guidance for Generative AI in Education*. United Nations Educational, Scientific and Cultural Organization. [https://www.unesco.org /en/articles/guidance -generative-ai-education] (https://www.unesco.org/en/articles/guidance-generative-ai-education
U.S. Department of Education. (2023). Artificial Intelligence and the Future of Teaching and Learning.
Tan, L. (2024). *Artificial Intelligence and teacher professional development: A systematic review (2015–2024) *. Computers & Education, 190, 104616
Zhai, X. (2023). ChatGPT in education: Applications, opportunities, and challenges in schools. Journal of Educational Technology & Society.

Appendix A: Questionnaire

Introduction:

Date of Data Collection: February–March 2025

This questionnaire is part of a research study investigating the effects of AI-assisted lesson planning on EFL teachers' efficiency and creativity. Your participation is voluntary, and your

responses will be kept confidential and used solely for research purposes. Please answer all questions honestly based on your personal experience.

Instructions:

- Tick (✓) the box that corresponds to your answer, or write your response in the space provided.
- There are five sections: Demographics, Use of AI Tools, Perceived Efficiency, Perceived Creativity, and Open-Ended Questions.

Section A: Demographic Information

1. Gender: ☐ Male ☐ Female
2. Age: ☐ Under 25 ☐ 25–34 ☐ 35–44 ☐ 45 and above
3. Academic Qualification: ☐ Bachelor's Degree ☐ Master's Degree ☐ Doctorate
4. Years of Teaching Experience: ☐ 1–5 ☐ 6–10 ☐ 11–15 ☐ More than 15
5. Level(s) Taught: ☐ Beginner ☐ Intermediate ☐ Upper-Intermediate ☐ Advanced

Section B: Use of AI Tools

6. Which AI tools have you used in lesson planning? (You may select more than one.)
☐ ChatGPT ☐ Grammarly ☐ Canva AI ☐ QuillBot ☐ Other (please specify):
7. How often do you use AI tools for lesson planning?
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always
8. How long have you been using AI tools in your teaching?
☐ Less than 3 months ☐ 3–6 months ☐ 6–12 months ☐ Over 1 year

Section C: Perceived Efficiency

Please indicate your level of agreement with the following statements (tick one). (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

1. AI helps me save time when preparing lessons. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
2. AI enables me to organize my lesson content more effectively. ☐1 ☐ 2 ☐ 3 ☐ 4☐ 5
3. Using AI reduces my workload in lesson planning. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
4. AI allows me to prepare lesson materials faster. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
5. AI improves the overall quality of my lesson plans. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Section D: Perceived Creativity

Please indicate your level of agreement with the following statements (tick one). (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

1. AI helps me generate creative ideas for classroom activities. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
2. AI provides new and diverse materials that inspire my teaching. ☐ 1 ☐ 2 ☐ ☐4☐ 5
3. AI motivates me to try innovative teaching strategies. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
4. AI enables me to design lessons that are more engaging for students. ☐1☐ 2 ☐ 3☐ 4☐ 5
5. AI enhances my confidence in preparing creative lessons. ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Section E: Open-Ended Questions

1. How has AI-assisted lesson planning influenced your teaching efficiency?

_____

2. In what ways has AI helped you become more creative in lesson design?

_____

3. What challenges or concerns have you faced when using AI tools for lesson planning?

_____

4. What kind of training or institutional support do you think teachers need to use AI effectively?

_____

Thank you for your time and participation!
Your responses will remain confidential and will be used only for research purposes.
The interview:
Each interview lasted approximately 10–15 minutes and was conducted in English or Arabic, depending on the participants' preference. Key questions included:

- How do you use AI tools when preparing your lessons?
- What specific advantages or disadvantages have you noticed?
- Can you describe a lesson where AI influenced your creativity?
- What challenges or ethical concerns do you face?