

# ChatGPT as an AI Assistant Tool to Enhance University Students' Teaching, Assessment and Academic Achievements: A Case Study of an EAP Lecturer

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**Abstract**—This study investigates the potential role of ChatGPT as an instructional assistant to support an English for Academic Purposes (EAP) lecturer in delivering an English for Architecture Design (EAD) course. It also examines ChatGPT's usefulness in student assessment and its impact on enhancing academic achievements. Out of a population of 92 students, 81 were able to join a Telegram group for course participation. Three data collection methods were employed: prompt crafting, an open quiz, and a final exam. Data was analyzed through descriptive and thematic analysis, statistical analysis, and manual grading. Results indicated that ChatGPT significantly supported the EAP lecturer in teaching methods, quiz and exam design, and enhancing students' learning outcomes. Recommendations are put forth to both students and educators to develop two essential skills of prompt crafting and critical thinking when integrating ChatGPT into academic settings. Exploring ChatGPT teaching potential, sharing findings with colleagues, and continuously contrasting outcomes with emerging research would open the door to larger future studies.

**Index Terms**—EAP, ChatGPT, teaching methods, classroom assessment, academic achievements

## I. INTRODUCTION

Integrating technology into English language learning and teaching has become essential in nearly all English as a Foreign Language (EFL) context. In an era of digital transformation, many university staff quickly adapted to these rapid changes to stay current. Educators view AI as an innovative facilitator, introducing new teaching methods and language assessment approaches that support EFL students within educational contexts (Mugableh, 2024). Moreover, AI tools have numerous functions in education, including the potential to enhance interaction and collaboration, specify learning experiences, provide personalized instructions and educational planning, analyze educational data, offer instant personal responses, and support educational decision-making (Espartinez, 2024). Moreover, the appropriate use of ChatGPT might make it suitable for higher educational institutions (HEIs) to invent and adapt their teaching methods to accommodate the different students they serve. Nowadays generations are dependent on technology, including ChatGPT in English Language syllabi which can significantly enhance EFL students' writing skills in different disciplines such as for Computing students (Al-Alami, 2024), and in thesis writing for EFL supervisors at the university level (Bani Amer et al., 2025). It is of vigorous significance for tertiary education institutions to promote, innovate, and adapt their teaching methods in English Language Teaching to accommodate the various students they serve. They can include ChatGPT in the English Language syllabus to increase students' motivation. Thus, tertiary education institutions should help include new technologies such as the proper use of ChatGPT that enhances teaching methods and accommodates students with different learning needs and styles (Marjanovikj-Apostolovski, 2024).

This study examines ChatGPT's role as a support tool for a university lecturer teaching EAP at the College of

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Architecture and Planning (CAP) in the Department of Architectural Design (DAD). University-level English lecturers, particularly those from English departments, may often lack content-specific knowledge when teaching English for Specific Purpose (ESP) courses in other departments. Traditionally, bridging this gap involves individual efforts to understand specialized content and seek guidance from relevant subject matter experts. However, due to the current conflict in Sudan, the customary support and collaboration with departmental staff were disrupted, creating challenges in educational norms and teaching practices. ChatGPT helps mitigate these challenges by supporting teaching methods and assessments and enhancing learning outcomes and procedures despite the ongoing situation. This study examines the potential of ChatGPT to assist in teaching methods, particularly during crises and wars. The study addresses the following objectives.

1. To assess the feasibility of using ChatGPT as a teaching assistant for an EAP lecturer teaching first-year Architectural Design students.
2. To examine ChatGPT's effectiveness in supporting assessment processes for first-year Architectural Design students.
3. To identify the advantages and potential opportunities of applying ChatGPT in EAP classrooms to enhance the academic achievements of Architectural Design students.

## II. LITERATURE REVIEW

AI tools are a branch of computer science focused on creating systems and programs that can learn from pre-existing data, analyze it, and perform tasks intelligently, often making decisions independently of human input. These tools aim to replicate human abilities, thinking processes, and decision-making through the stored data.

### A. AI Tools in Education

Educators view AI as an innovative facilitator, introducing new teaching methods and language assessment approaches that support EFL students within educational contexts (Mugableh, 2024). It has significantly reshaped human life, particularly impacting English language learning and student outcomes in classroom settings. Traditionally, AI technology offers assistance with educational materials, classroom instruction, and grammar exercises. More recently, it has been added to the broader teaching and learning process, enhancing language acquisition experiences. AI supports personalized feedback, interactive learning, and exercises tailored to individual academic levels, ultimately fostering greater academic achievement (Alneyadi & Wardat, 2023). Recent research by Pahi et al. (2024) proved that the learning experience of students can be enhanced through the effective use of teaching assistants and additional aid from generative AI.

Current research recommends that teachers consider incorporating AI technology within classroom environments and explore the benefits these tools can bring to students (Shikun et al., 2024). Law (2024) has recommended future research to focus on specific language skills such as speaking or writing in different languages to use GenAI tools in classroom interventions. They assume that this interaction between GenAI tools and teachers would enhance the education environment and develop more effective instructional strategies. Thus, AI literacy and competency are nowadays vital for both students and teachers in education, and AI for All remains an initiative with many questions in every aspect of it (Chiu & Sanusi, 2024).

### B. ChatGPT in Language Teaching, Assessment, and Academic Achievement

ChatGPT, a generative pre-trained transformer, leverages neural networking, machine learning, deep learning, and Natural Language Processing (NLP) to generate responses and derive insights from existing data. Several authors have noted the significant potential of ChatGPT in supporting teaching and learning activities (Cooper, 2023; Gill & Kaur, 2023; Sabzalieva & Valentini, 2023). ChatGPT can serve in various supportive roles, such as "guide-on-the-side, co-designer, motivator, collaboration coach, and personal tutor, providing a flexible support system for students" (Sabzalieva & Valentini, 2023, p. 9).

Zhu et al. (2023) states that "Multiple strategies are suggested to optimize ChatGPT's educational potential, including its use as a virtual tutor to answer student inquiries, an assistant for creating instructional content, expert support for tackling complex tasks, a learning buddy, a reflective learning tool, and a catalyst for fostering critical thinking" (p. 149). Moreover, Hong (2023) emphasizes that, given ChatGPT's promising support for L2 language instruction, teachers should view it as a valuable learning tool and evaluate its affordability and practical benefits. ChatGPT's automation of tasks like assessment and administrative work can save educators time (Octavio et al., 2024). It also plays a role in curriculum development and content creation (Kasneeci et al., 2024). Kamal and Khaidzir (2024) highlight ChatGPT's ability to mimic human-like assistance in writing, particularly in academic contexts that require formal writing skills. However, they also draw special attention to the extreme usage of ChatGPT and dependence on it which impedes the natural process of learning.

Consequently, this might lead to the ineffectiveness of people in situations where system errors or outdated information might occur. They suggest more research to be conducted examining the actual utilization of ChatGPT within the educational community. Kasneeci et al. (2024) further underline ChatGPT's capacity to generate text, answer questions, and handle language-related tasks, making it beneficial for learners across proficiency levels. However, the

literature points to potential drawbacks and challenges in using ChatGPT, especially concerning ethical considerations, information bias, and occasional low-quality outputs (Cooper, 2023; Gill & Kaur, 2023; Meyer et al., 2023; Zhu et al., 2023). Issues such as plagiarism and learner overreliance on ChatGPT with minimal personal effort are also concerns. Moreover, the interaction with an AI chatbot like ChatGPT is usually an unbalanced two-way process of the human asking questions and the AI chatbot usually provides answers in one spot without checking understanding. AI chatbots do not ask explaining questions about unclear prompts but infer meaning and give an answer accordingly (Chinoso et al., 2023).

### III. METHODOLOGY

#### A. Questions of the Study

This study adopts a mixture of qualitative and quantitative approaches to address the study questions of a single case study to gain perceptions into the use of ChatGPT by an EAP lecturer to support her teaching tasks, students' assessments, and gain insights into students' academic achievements. Thus, the study focuses on the potential of ChatGPT for EAP teaching purposes.

It aims to address the following study questions:

1. To what extent does the EAP lecturer integrate ChatGPT into the teaching methods for first-year students in the Architectural Design program?
2. How do ChatGPT-generated quizzes and exams assist the EAP lecturer in students' assessment of the Architectural Design program?
3. To what extent does the integration of ChatGPT with an EAP lecturer impact the academic achievement of first-year students of the Architectural Design program?

#### B. Participants

The primary participant was an experienced EAP lecturer with over twenty years of university-level teaching experience, including familiarity with e-learning tools since the COVID-19 pandemic. In 2023, she began utilizing AI tools, including GPT-3, primarily for translation tasks between English and Arabic and to alleviate cognitive load through ChatGPT-generated responses. The EAP lecturer consented to share this experience of interaction with ChatGPT over four months for this study.

The student participants were first-year students, aged 20-21, from the CAP, DAD enrolled in an EAP course during the second semester of the 2022-2023 academic year. This EAP course focused on using architectural content to teach EAP, with a curriculum developed by the DAD and delivered by the EAP lecturer.

The course was of ten lectures, each two hours per week, covering topics from general architectural knowledge to technical vocabulary, pronunciation practice, and foundational concepts in mathematics and computer science. Initially, twelve lectures were planned, in addition to extra three weeks for an open quiz and revision; however, the outbreak of war in Sudan forced many students to relocate, limiting in-person engagement.

#### C. Instruments

Data for this mixed-method case study was collected using two instruments:

##### (a). An Open Online Quiz

During the first month, the lecturer announced an open quiz via Google Forms. Designed with assistance from ChatGPT, the quiz of 30 multiple-choice questions (MCQs) assessed fundamental architectural knowledge and English language skills. This quiz served to evaluate students' content knowledge and familiarity with online tools. However, technical challenges emerged: students struggled to create Gmail accounts needed for quiz access due to limited resources and poor internet connectivity. To address this, the lecturer modified the quiz settings to allow login without requiring an email. For practice, a mock-quiz was shared on Telegram, and 68 students participated. The final open quiz, which was open for a week, received responses from 50 of the 81 students.

##### (b). A Final Written Paper-Based Exam

At the semester's end, a final paper-based exam was administered, designed in collaboration with ChatGPT. The lecturer provided ChatGPT with selected lecture content in three intervals due to data size limitations. ChatGPT helped in creating varied question forms, including MCQs, True/False, fill-in-the-blank, and matching exercises. 50 students were able to sit for the final paper exam out of 81, again due to the conflict in the country.

To sum up, collecting data from three sources (i.e., outputs, and two performance data) using multiple methods (i.e., chatbot outputs and assessment) adds to source and method triangulation. Furthermore, the reliability of the data collection was ensured through an extensive discussion of the qualitative instrument among the study team and proofreading the quiz and the final paper exam. The EAP lecturer checked grammar, spelling, question, and statement structures and contents in both types of assessment.

#### D. Data Collection Procedures

On the first day of the conflict, on April 15, 2023, Sudanese Universities shut down. About a year later, Sudanese HEIs gradually began transitioning to an online education system. Sudan University of Science and Technology (SUST) was among those resuming classes, initiating an EAP course for first-year students in the CAP and DAD. This EAP course for architecture students was conducted from January 21 to May 25, 2024.

Despite the challenging circumstances, higher education authorities strived to maintain educational continuity across public and private universities within and outside Sudan. However, weak internet connectivity presented significant challenges, disrupting the educational process at all levels nationwide. Students faced urgent pressures, including securing safety for themselves and their families, as they often had to relocate within or outside Sudan to find secure environments. This life-threatening context pushed authorities to resume teaching, as students and lecturers navigated both personal and logistical hardships.

To support instruction in these conditions, the EAP lecturer appointed a student coordinator to facilitate communication between the students and herself, helped with technical challenges, and assisted the teaching and learning process. The coordinator set up a Telegram group where students received PowerPoint slides and audio recordings directly from the lecturer. While the lecturer encouraged students to attend the initial live lecture, only 40 of the 81 students had joined the Telegram group at that time, and of those, just 18 were able to attend the session live due to severe internet connectivity issues in their regions.

Consequently, all subsequent lectures were delivered via video and audio recordings, supplemented with PowerPoint slides. Through this Telegram group, participants succeeded in participating in attending live and offline lectures, online quizzes, and traditional face-to-face final exams. These lectures were attended by a varied number of students due to the availability of electricity, internet connection, and human security.

#### IV. RESULTS AND DISCUSSION

This study is a descriptive, experimental, and analytic study. Data were analyzed using SPSS/statistical analysis version 20 and a combination of qualitative and quantitative methods:

- Lecture Data-Tasks: Analyzed qualitatively to explore how ChatGPT supported lecture preparation, interpretation, and comprehension of specialized architectural content.
- Quiz Data: Quantitative, descriptive, and statistical methods were used to analyze the results of the open quiz, with immediate feedback provided to students.
- Comparative Analysis: Results from the open quiz and final exam were compared with each other to assess overall academic achievements at the end of the course.

This study adopted the research guidelines for social scientific studies from SUST. It was approved by the Institutional Ethics Committee of SUST.

##### A. *Prompt Crafting and Integration of ChatGPT in Teaching Methods*

This section presents results addressing the first study question:

##### 1. **To what extent does the EAP lecturer integrate ChatGPT into the teaching methods for first-year students in the Architectural Design program?**

The lecturer used ChatGPT as a key support tool for interpreting specialized architectural content. This experience was very useful, with the non-face-to-face communication with architectural faculty and the challenges in conducting online meetings. ChatGPT enabled the lecturer to gain architectural insights, answer content-related questions, and enhance lecture materials. By engaging ChatGPT, the lecturer was able to quickly overcome content comprehension issues in architecture, saving time and bypassing traditional reference materials.

##### (a). *Lecture Integration and Vocabulary Support*

Focusing on foundational mathematical concepts, the lecturer asked students to do exercises involving basic equations and vocabulary from their course contents in Lecture One. Aimed at enhancing speaking skills, ChatGPT helped with terms used in personal introductions such as 'country', 'age', and 'job' in Lecture Two. Lecture Three introduced a reading passage on garden design, which included architectural vocabulary. Rather than consulting a dictionary, the lecturer turned to ChatGPT to instantly interpret architectural terms such as design, set-square, setting out, and debris. ChatGPT provided relevant, context-specific definitions, allowing the lecturer to transfer accurate information directly to students.

##### (b). *Examples of ChatGPT's Assistance*

ChatGPT helped with the following definitions:

- Design: The design must be suitable for the user's experience and meet client or project requirements.
- Explain: Architecture often involves planning, designing, and constructing buildings or structures.
- Required: A well-defined requirements architecture ensures all specifications contribute to business objectives and stakeholder outcomes.

##### (c). *Exercise Support and Content Clarifications*

The EAP lecturer encountered an exercise that required students to relate sets of architectural terms, e.g., “design – explain – required – calculation”. With a limited architectural background, the lecturer asked ChatGPT for clarification and responded with insightful, detailed explanations of how each word related within an architectural context. Moreover, ChatGPT supported pronunciation practice and word transformations in Lecture Four. Examples were in exercises asking students to change verbs like “estimate” and “operate” into nouns.

1. Exercise Prompts and ChatGPT Responses

ChatGPT’s explanations helped contextualize terms, e.g.,

- Triangle – Rectangle – Quadrilateral – Pentagon – Hexagon: These shapes are common in architectural design and used as foundational elements in structural layouts.

- Square Inch – Square Root – Percentage: Mathematical concepts essential for measurement and calculations in architecture.

2. Specialized Context Understanding for Practical Exercises

In addition to terminology, ChatGPT enabled the EAP lecturer to tackle complex questions requiring contextual architectural knowledge, such as the process of making a set square. Upon being prompted, ChatGPT provided step-by-step answers on materials and techniques needed to create a set square. Instructions on using sturdy materials such as plastic or metal, cutting tools, and measurement techniques are key in architectural practice.

3. Detailed Example Provided by ChatGPT on Set Square Creation

Materials needed included sturdy plastic, wood, or metal, a ruler for precise measurements, and a cutting tool. ChatGPT’s detailed responses facilitated the lecturer’s understanding of these practical aspects, allowing her to guide students effectively through these specialized exercises.

4. Comparison Exercises – Differences Between Terms

In a later lecture, the EAP lecturer found content requiring students to differentiate terms like “pyramid”, “cube”, and “cone”. ChatGPT promptly provided structured responses that outlined definitions within architectural contexts, enabling her to provide clear and accurate explanations.

5. Example of ChatGPT’s Differentiations

- Pyramid: A polyhedron with a polygonal base and triangular faces meeting at an apex.

- Cube: A polyhedron with six square faces, all congruent.

- Cone: A solid with a circular base tapering to an apex.

These responses helped the EAP lecturer bridge gaps in content comprehension, ensuring students receive relevant and precise explanations.

*B. Open Quiz and Final Exam Results*

To evaluate students’ understanding, the lecturer administered an open online quiz and a final paper-exam, both developed in collaboration with ChatGPT.

*(a). Open Online Quiz*

The open online quiz, accessible via Google Form, included multiple-choice questions created by ChatGPT upon the lecturer’s request, covering basic architectural and English language concepts. A trial quiz was made available for practice, with 68 of 81 students participating. The final quiz, which was open for a week, got responses from 50 students, reflecting their growing familiarity with online tools.

*(b). Final Written Paper- Based Exam*

The final paper exam included various question types (MCQs, True/False, fill-in-the-blank, and matching) based on content processed through ChatGPT. ChatGPT’s assistance in question design allowed for a range of evaluative questions that tested architectural terminology, units of measurement, and related knowledge. 50 students attended the final exam.

Thus, the EAP lecturer’s experience showed that ChatGPT proved a highly effective tool for rapid content clarification, vocabulary support, and exercise development, aiding both comprehension and delivery of specialized architectural content. Students’ performance across the open quiz and final exam also demonstrated ChatGPT’s utility in supporting the lecturer’s efforts to meet curriculum objectives, even among challenging conditions. Below, Table 1 showed an open online quiz and final paper exam analysis:

TABLE 1  
OPEN ONLINE QUIZ AND FINAL PAPER EXAM ANALYSIS

Assessment	Number of Students	Mean	Median	Standard Deviation	Comment
Open Quiz	50	18.86	20.00	5.18	The open-quiz performance was moderate, with students scoring around 20 out of 30.
Final Exam	50	37.46	40.00	7.48	Final exam scores improved, with a mean of 37.46 out of 50, showing progress from the open-quiz.

The above Table 1 answered study question (2):

**How do ChatGPT-generated quizzes and exams assist the EAP lecturer in students’ assessment of Architectural Design program?**

Analyzing the open-quiz score vs. final exam score differential to understand how much each student improved between assessments and evaluation if ChatGPT-assisted quizzes were useful in guiding the lecturer’s assessment strategy, as presented in Table 2 below.

TABLE 2  
THE OPEN-QUIZ SCORE VS. FINAL EXAM SCORE DIFFERENTIAL

Student No.	Open-Quiz (out of 30)	Final Exam (out of 50)	Score Improvement	Percentage Improvement	Comment
1	17	41	+24	47.50%	Significant improvement from open-quiz to final exam.
2	26	46	+20	40.00%	High initial open-quiz score maintained high performance in final.
3	21	44	+23	46.00%	Strong improvement from initial open-quiz score.
8	0	34	+34	68.00%	Substantial improvement from zero in open-quiz.
...	...	...	...	...	...
Mean	18.86	37.46	+18.60	37.20%	The average student improved by 18.6 points or 37.20%.

The above Table 2 showed that the average score improvement was 18.6 points (37.20%). This suggested that the ChatGPT-generated quizzes provided valuable formative assessment opportunities that helped guide students toward better performance in the final exam.

Students who started with low quiz scores, such as Student 8, made substantial improvements by the final exam, which might indicate that the early exposure to content through ChatGPT-assisted quizzes helped them identify and address weaknesses early on.

To answer question 3 of this study:

**To what extent does the integration of ChatGPT with an EAP lecturer impact the academic achievement of first-year students of Architectural Design program?**

To assess this, the researchers analyzed the distribution of performance improvement by categorizing the students, based on the extent of their improvement to identify whether ChatGPT usage significantly contributes to academic achievement across different student performance levels, as presented in Figure 1.

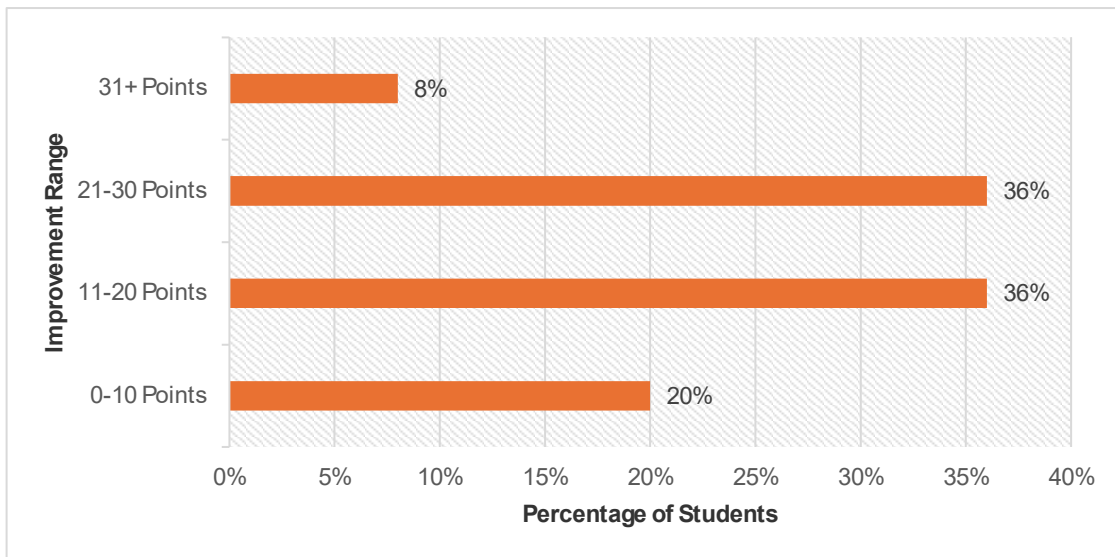


Figure 1. Distribution of Students’ Performance Improvement

Figure 1 showed that most students (72%) improved by more than 11 points, and 44% of students improved by 21 points or more. This suggests that the integration of ChatGPT had a meaningful impact on students' learning and academic achievement.

A small portion of students (8%) experienced very high improvement (31+ points), suggesting that for some students, ChatGPT may have had a transformative impact on their academic performance.

*C. Regression Analysis*

The regression model assessed how well the open-quiz scores (independent variable) predicted final exam scores (dependent variable). Below is a summary of these findings shown in Table 3 below:

TABLE 3  
REGRESSION ANALYSIS

Metric	Value	Comment
R-squared	0.211	21.1% of the variance in final exam scores is explained by the quiz scores.
Adjusted R-squared	0.194	Slightly lower, adjusted for the number of predictors (quiz scores).
F-statistic	12.81	The model is statistically significant, meaning quiz scores significantly predict final exams.
P-value (F-statistic)	0.000801	This confirms that the model's relationship between quiz and final exam scores is not by chance.
Constant (Intercept)	24.96	This represents the baseline final exam score when the quiz score is 0.
Quiz Score Coefficient	0.6628	For every 1-point increase in the quiz score, the final exam score increases by 0.66 points.

Table 3 showed that the R-squared of 0.211 indicated that 21.1% of the variance in final exam performance could be explained by the open quiz scores. While this showed some predictive power, it also suggested other factors significantly contributed to final exam results.

The coefficient of 0.6628 implied that for every 1-point increase in a student's quiz score, their final exam score was expected to increase by approximately 0.66 points, confirming that early performance (quiz) moderately influenced final performance.

These results suggested that while quiz scores could be used to predict final exam outcomes to some extent, there were other significant factors affecting academic achievement. The integration of ChatGPT-generated quizzes likely played a role, but the final success depended on a variety of elements beyond just early assessments.

*D. Reliability of the Outputs*

To enhance the reliability of ChatGPT's outputs in this context, especially when using it as a teaching assistant in EAP settings, the EAP lecturer applied strategies inspired by similar research, adapting them to fit the needs and challenges specific to the current students and environment.

*Strategies for Ensuring Reliable ChatGPT Outputs*

In this study, the EAP lecturer ensured ChatGPT's responses were accurate by comparing them with reliable sources. In this context, the lecturer encouraged some of the students to verify the information provided by ChatGPT by cross-referencing with trusted academic references that were readily available to them. For instance, for topics in architectural design, the lecturer assigned tasks for some students to consult credible and available textbooks in architecture to validate any technical terms or definitions ChatGPT provided.

By involving one available colleague in reviewing ChatGPT's responses, the EAP lecturer in this study succeeded in creating a collaborative learning environment. This approach did not only help detect any inaccuracies, but also engaged teachers in critical thinking, which was essential for assessing AI-generated content.

In this study, the EAP lecturer used reputable fact-checking tools and websites. While access to such resources might be limited in Sudan, she relied on collaboration with only one colleague who was keen to help in this relevant field of architecture, to validate content accuracy. This approach helped verify any technical or specialized content provided by ChatGPT, especially in cases where accuracy is essential for understanding complex concepts.

Crafting clear and specific prompts is essential for obtaining reliable outputs from ChatGPT. In this classroom, the EAP lecturer tried her best and asked specific, well-structured questions to ChatGPT to help reduce ambiguity in responses, making the outputs more relevant and accurate. This strategy also helped in how to interact thoughtfully with AI tools, maximizing the quality of information they receive and checking for grammatical accuracy, cultural sensitivity, and coherence.

By implementing these strategies, the EAP lecturer managed to use ChatGPT as a reliable and supportive educational tool while fostering critical thinking skills among students. This approach not only enhanced the dependability of ChatGPT's outputs but also ensured that its integration into EAP teaching aligns with the educational needs and values of students in the Sudanese context.

The data analysis carried out showed the potentiality of ChatGPT as an instructional and assessment tool enhancing students' academic achievements (Marjanovikj-Apostolovski, 2024; Mugableh, 2024; Alneyadi & Wardat, 2023; Cooper, 2023; Gill & Kaur, 2023; Sabzalieva & Valentini, 2023). The EAP lecturer used this period as an exploratory phase to assess how ChatGPT could support teaching methods and student assessments. Espartinez (2024) recommended to enhance ChatGPT in educational settings by including clear guidelines for student assessment. By engaging with ChatGPT in various sessions, the lecturer observed how responses were generated and evaluated their accuracy, clarity, and relevance to the questions modeled, which varied from general to discipline-specific prompts in

English language teaching. This allowed the lecturer to develop a critical understanding of ChatGPT's performance and identify where guidance was needed for effective teacher/student use.

This approach that the EAP lecturer followed was aligned with Hong (2023), who explored ChatGPT's usefulness as both a learning tool and a teaching assistant. The EAP lecturer's use of ChatGPT showed potential in supporting various tasks, including teaching, assessment, and enhancing students' academic achievements. These tasks helped update processes for both teachers and students, contributing to consistent evaluations and enhancing language proficiency through self-assessment practices.

The EAP lecturer was also hard-working in verifying the quality and reliability of ChatGPT-generated information, ensuring there was no bias in responses (UNESCO, 2019; Zhu et al., 2023). Additionally, as Kohnke et al. (2023) suggested, it would benefit EAP teachers to develop tailored strategies for using ChatGPT effectively to meet their specific teaching objectives.

According to Kohnke et al. (2023), digital competence involves technological proficiency, pedagogical adaptability, social awareness, and critical thinking. The EAP lecturer showed proficiency across these competencies by developing notable prompting skills and using ChatGPT strategically for explaining tasks, exercises, and assessments. The EAP lecturer's thoughtful approach extended beyond technical application, encompassing broader considerations of the societal and ethical implications of using ChatGPT in educational settings.

## V. CONCLUSION

Observing the EAP lecturer's teaching methods and strategies alongside ChatGPT over four months provided visions into this developing tool's impact on classroom dynamics. The lecturer demonstrated growing expertise in digital competencies that enhanced her ability to power ChatGPT effectively (Kohnke et al., 2023). This experience emphasized two essential skills—prompt crafting and critical thinking—that both teachers and students should develop when integrating ChatGPT into academic settings.

### A. Findings

Data analysis confirmed that the EAP lecturer successfully incorporated ChatGPT in the classroom, refining prompts from simple syllabus-based questions to more challenging ones as the course proceeded. The lecturer's skills in writing clear and straightforward prompts contributed significantly to ChatGPT's ability to respond accurately and relevantly. ChatGPT also assisted with specific tasks requiring architectural knowledge, including designing open quizzes to assess foundational knowledge in architecture and English. ChatGPT even occasionally provided innovative ideas for task implementation, enriching the classroom experience.

The EAP lecturer adopted strategies to verify the reliability of ChatGPT's information, which included cross-referencing responses with input from students, herself, and other faculty members in architectural design. This thorough approach not only protected information accuracy but also established credibility within the educational context.

Though this case study is limited to a single lecturer, the findings open the door to larger studies that can build on this empirical foundation. ChatGPT has shown promise as a valuable asset in the L2 classroom, impacting three critical areas: in-class task support, assessment, and student achievement. This multipurpose GenAI tool enables educators to craft engaging lessons, provide interactive teaching, and perform comprehensive evaluations.

This study suggests that ChatGPT, when used considerately, can significantly shape L2 learning, creating more efficient and enriching educational experiences. It is basic for educators to explore its teaching potential, share findings with colleagues, and compare outcomes with emerging research, as exemplified by this EAP lecturer.

### B. Implications

The implications of this study are multi-layered and relevant for both educators and institutions to target AI tools like ChatGPT in educational contexts. This study reveals that ChatGPT can support EAP lecturers by providing tailored content, facilitating interactive teaching, and suggesting innovative instructional strategies. This implies a shift toward blended teaching models that combine human expertise with AI tools. Furthermore, ChatGPT's usage in designing quizzes, interpreting contents, and enhancing students' academic achievements highlights its role as a co-creator of assessment tools, potentially reducing educators' workload while improving assessment diversity and alignment with course objectives. Moreover, the study emphasizes the necessity for educators to grow AI-related skills, particularly in prompt crafting and critical thinking. This emphasizes the need for professional development programs that equip teachers with the knowledge to effectively and responsibly use AI tools in educational settings. The study also displays that ChatGPT positively impacts student learning outcomes by offering personalized support and instant feedback. This ensures that AI tools can bridge learning gaps, cater to diverse learning paces, and enhance student engagement in complex subjects like English for Architectural Design. Moreover, the study recognizes inaccuracies in ChatGPT's responses, emphasizing the educators' role in validating outputs. This highlights the need for responsible AI integration, where educators act as caretakers to ensure content quality and appropriateness. The necessity of technological infrastructure and digital literacy also highlight the potential barriers, particularly in conflict-affected regions like Sudan, where access to technology and internet stability may vary.

To sum up, universities and educational bodies might consider revising curricula to incorporate AI literacy for both educators and students. Institutions may also need to establish guidelines and ethical frameworks for using generative AI tools to balance innovation with academic integrity and data privacy concerns.

### C. Limitations of the Study

This study focused on a single course (English for Architectural Design) taught by an EAP lecturer at a specific university. This narrow context limits the generalizability of findings to other disciplines, institutions, or broader educational settings. Moreover, the delay in course delivery due to the conflict in Sudan likely affected the timeline and continuity of the study. These outside disturbances might have influenced student participation, data consistency, and outcomes. Dependency on tools like Telegram for student interaction and access to ChatGPT adopts a certain level of technological infrastructure and digital literacy, which may not be constant among all students or replicable in regions with limited resources. This study emphasized that teachers need to verify ChatGPT's responses for accuracy and relevance. This dependency introduces the potential for human errors in decisions, as well as additional workload for teachers in reviewing AI-generated content. While 50 students participated in the study, this is a relatively small sample size for illustrating generally valid conclusions. The study assessed instant impacts on teaching methods, assessments, and student achievements but did not address long-term effects, such as retention of knowledge, critical thinking development, or post-course success.

### D. Recommendations for Future Research

This study advocates teachers and educators to share experiences and best practices with peers to build a cooperative knowledge base on AI integration. This could lead to more vigorous, evidence-based practices in AI-supported education. Thus, the study recommends teachers develop critical thinking and prompt crafting skills when they use AI tools like ChatGPT to enhance their autonomy in teaching and problem-solving. Although these findings have made a significant contribution to local and regional research and educational communities, they could be generalized in the future to capture more diversified proposals and projects. Chiu and Sanusi (2024) have recommended more co-design or design-based studies to capture diverse perspectives from engineers, educational researchers, and practitioners to generate more innovative activities with ChatGPT. Some future recommendations are as follows:

1. Conduct similar studies across various disciplines, educational levels, and institutions to examine whether ChatGPT's benefits are reliable in varied contexts and among different student populations.
2. Investigate the sustained impact of ChatGPT-assisted teaching on students' academic progress, critical thinking skills, and professional development over longer periods.
3. Compare ChatGPT-assisted teaching with traditional teaching methods to assess differences in learning outcomes, student engagement, and instructor efficiency.
4. Study how ChatGPT can be implemented in regions with limited technological infrastructure and explore alternatives to ensure equitable access to AI tools for all students.
5. Explore ways to make ChatGPT more adaptable to specific course needs by developing tailored AI tools or frameworks for different academic contexts.
6. Expand future studies to include larger, more diverse populations across multiple countries to enhance the reliability and generalizability of findings.

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