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Leveraging Artificial Intelligence for Self-Regulated Learning in EFL Presentation Skill Acquisition: Learner Perceptions and Practices

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ABSTRACT

The development of effective presentation skills is crucial for English as a Foreign Language (EFL) learners in academic and professional contexts. This complex skill necessitates not only linguistic proficiency but also strategic self-regulation. With the rapid integration of Artificial Intelligence (AI) into language education, understanding how EFL learners leverage these tools for self-regulated learning (SRL) in developing presentation skills has become paramount. This study investigates the priorities and utilization patterns of AI-enhanced SRL among EFL learners focused on improving their presentation abilities. Employing a qualitative research design, data were collected through semi-structured interviews with university-level EFL students. Thematic analysis revealed that learners prioritize AI tools for enhancing linguistic accuracy (pronunciation, grammar, vocabulary), improving fluency, and managing public speaking anxiety. Their utilization patterns spanned across various SRL phases, from forethought (content generation, outlining) to performance (rehearsal with AI feedback) and self-reflection (analyzing AI-generated performance reports). While participants appreciated AI's accessibility, personalized feedback, and anxiety-reducing potential, challenges related to over-reliance, authenticity, and ethical considerations were also identified. These findings offer valuable insights for educators and developers regarding the pedagogical integration of AI to foster more effective and self-directed language learning environments, particularly in the realm of complex communicative skills like presentations.

Keywords: Artificial Intelligence, Self-Regulated Learning, EFL Learners, Presentation Skills, Speaking Anxiety, Language Learning Technology.

INTRODUCTION

In today's interconnected world, English as a Foreign Language (EFL) learners are increasingly expected to demonstrate strong oral communication skills, with public speaking and presentations being key components in both academic and professional settings [28, 32]. Effective presentation skills encompass a multitude of competencies, including clear articulation, fluent delivery, appropriate vocabulary and grammar, and effective non-verbal communication [28, 39]. For EFL learners, mastering these skills is often compounded by challenges such as limited fluency, pronunciation difficulties, grammatical inaccuracies, and significant public speaking anxiety [4, 29, 39, 47]. These challenges necessitate not only dedicated practice but also the adoption of effective learning strategies, prominently including self-regulated learning (SRL) [33, 49].

Self-regulated learning is a proactive process where learners take control of their own learning by setting goals,

planning strategies, monitoring their performance, and reflecting on their learning outcomes [49]. In the context of second language (L2) acquisition, SRL has been linked to improved motivation, metacognitive knowledge, self-efficacy, and ultimately, enhanced learning achievement [9, 10, 19, 20, 33, 43, 49]. For instance, effective SRL strategies contribute to vocabulary acquisition and overall language knowledge [20, 43], as well as metacognitive engagement in listening comprehension [10] and writing performance [44]. However, developing strong SRL skills can be demanding, requiring learners to actively manage their cognitive load, motivation, and emotional states throughout the learning process [33, 43].

The landscape of language learning has been significantly transformed by technological advancements, most notably with the rapid evolution and integration of Artificial Intelligence (AI) [6, 38, 41, 42]. Generative AI (GenAI) and Large Language Models (LLMs) such as ChatGPT have emerged as powerful tools with immense potential to revolutionize language education by offering personalized feedback, interactive practice environments, and extensive resources [8, 12, 24, 26, 31, 45, 46]. AI-powered tools can support various aspects of language learning, from vocabulary acquisition through image recognition [20] to improving speaking skills and willingness to communicate through mediated interactions and applications [13, 30, 41, 47]. AI also aids in collaborative learning, content development, and even professional development for teachers integrating AI into their pedagogy [16, 25, 27, 36, 48].

Despite the growing body of literature on AI in language learning, a specific gap exists in understanding how EFL learners, as self-regulators, prioritize and actually utilize AI tools to develop a complex, integrated skill such as presentation delivery. While previous studies have explored general acceptance of AI for speaking practice [50] or attitudes towards ChatGPT [3, 12, 23], the granular details of how learners strategically select and apply AI tools across different SRL phases for specific presentation components (e.g., content, delivery, confidence) remain underexplored. This study aims to fill this gap by investigating:

1. What aspects of presentation skills do EFL learners prioritize when using AI-enhanced self-regulated learning?

2. How do EFL learners utilize AI tools to support different phases of self-regulated learning in their presentation skills development?

3. What are EFL learners' perceived benefits and challenges of using AI for self-regulated presentation skill development?

By addressing these questions, this research seeks to provide deeper insights into the learner-AI interaction for complex skill development, informing more effective pedagogical designs and AI tool development in EFL contexts.

METHODOLOGY

2.1. Research Design

This study adopted a qualitative research design to deeply explore EFL learners' perceptions, priorities, and utilization patterns of AI-enhanced self-regulated learning in developing presentation skills. A qualitative approach was chosen to capture the nuanced and subjective experiences of learners, allowing for an in-depth understanding of their strategic decision-making and practical application of AI tools within their individual learning processes [2].

2.2. Participants and Context

The participants in this study were university-level EFL learners enrolled in an English for Academic Purposes (EAP) course at a large public university in Southeast Asia. This specific context is relevant due to the increasing emphasis on English communication skills in higher education and the globalized workforce [14]. A total of 15 EFL students (8 female, 7 male) aged between 19 and 22 years voluntarily participated in the study. All participants had prior experience with public speaking or giving presentations in English and reported using various digital tools for language learning. Participants were selected via purposeful sampling to ensure they had experience with both presentation tasks and exposure to AI tools in their learning.

2.3. Data Collection

Data were primarily collected through semi-structured interviews. This method allowed for flexibility in exploring emerging themes while ensuring coverage of key areas related to AI use, SRL, and presentation skills development. Each interview lasted approximately 45-60

minutes and was conducted in English. The interview protocol included questions designed to elicit information on:

- Learners' current presentation skill development challenges and goals.
- Their understanding and practice of self-regulated learning.
- Their familiarity and experience with various AI tools for language learning.
- Specific instances of using AI tools for presentation practice, including what aspects they focused on (priorities), how they used the tools (utilization strategies), and why they chose particular tools or methods.
- Perceived benefits and drawbacks of using AI for their presentation skill development.

All interviews were audio-recorded with the participants' consent and transcribed verbatim for analysis. To enhance the richness of data, participants were encouraged to provide concrete examples of their AI tool usage where possible.

2.4. Data Analysis

The collected interview transcripts were analyzed using thematic analysis, following the six-phase guide by Braun and Clarke [2]. This inductive approach allowed themes to emerge directly from the data rather than being imposed by pre-existing theoretical frameworks. The phases included:

1. Familiarizing with the data: Repeated reading of transcripts to gain an overall understanding.

2. Generating initial codes: Identifying interesting features across the entire dataset and coding them. This involved noting instances where learners described their motivations, specific AI features used, or challenges encountered.

3. Searching for themes: Grouping codes into potential themes that captured recurring patterns and meanings.

4. Reviewing themes: Refining themes to ensure they were coherent, distinct, and accurately reflected the data. This involved checking if the themes told a convincing story about the data.

5. Defining and naming themes: Developing detailed definitions and names for each theme, clearly outlining what each theme was about and how it related to the research questions.

6. Producing the report: Selecting compelling data extracts to illustrate the themes and writing the final analysis.

2.5. Ethical Considerations

Prior to data collection, informed consent was obtained from all participants. They were assured of anonymity and confidentiality, and their right to withdraw from the study at any time was emphasized. All personal identifiers were removed from transcripts. The study protocol was approved by the institutional review board.

RESULTS

The thematic analysis of interview data revealed three overarching themes related to EFL learners' prioritization and utilization of AI in self-regulated learning for presentation skills development: (1) Strategic Prioritization of Presentation Components, (2) Diverse AI Utilization Across SRL Phases, and (3) Perceived Affordances and Limitations of AI Integration.

3.1. Strategic Prioritization of Presentation Components

EFL learners demonstrated a clear prioritization of specific components of presentation skills when engaging with AI-enhanced SRL. These priorities were largely driven by their perceived weaknesses and anxiety levels related to oral communication in English.

- Linguistic Accuracy (Pronunciation, Grammar, Vocabulary): The most frequently cited priority was improving linguistic accuracy. Learners often used AI to refine their pronunciation, address grammatical errors, and expand their vocabulary for formal presentation contexts. Participants reported using AI speech recognition tools for immediate pronunciation feedback, which helps in identifying and correcting errors that a human listener might miss or be hesitant to point out directly [21, 22, 47]. One participant stated, "My biggest fear is mispronouncing words, so I use the AI speech evaluation program to check my pronunciation before every presentation" (P7). This

aligns with research indicating AI's effectiveness in enhancing L2 speaking proficiency and reducing pronunciation difficulties [21, 47]. Learners also utilized generative AI (e.g., ChatGPT) to check grammar in their scripts and to suggest more formal or academic vocabulary, acting as an advanced proofreader and synonym dictionary [8, 12, 23, 24].

- Fluency and Delivery: Developing smoother, more natural delivery was another key priority. Learners used AI to practice their speaking pace, rhythm, and overall fluency. They would record themselves delivering parts of their presentation and then analyze AI-generated feedback on speaking rate, pauses, and fillers. This aligns with studies showing AI's role in improving willingness to communicate and speaking skills through iterative practice [13, 30, 41]. "I need to sound less robotic. The AI gives me feedback on my speaking speed and if I'm pausing too much, which helps a lot with my fluency" (P3). This self-monitoring capability provided by AI tools supports learners in developing spoken fluency, a critical aspect of effective public speaking [32].

- Content Generation and Structure: Prior to actual delivery practice, many learners prioritized using AI for the forethought phase of SRL, specifically for content generation, brainstorming, and structuring their presentations. They would prompt AI to generate outlines, suggest introduction and conclusion strategies, or even draft sections of the presentation based on key points [23, 24, 26, 31, 34]. This indicates that AI is being leveraged not just for language refinement but also for conceptual and organizational support, helping learners plan more effectively [49]. "I'm not good at structuring arguments, so ChatGPT helps me outline my presentation points logically. It's like having a co-creator for my content" (P11). This highlights the shift towards AI as a collaborative partner in the learning process [46].

- Anxiety Reduction: A significant number of participants prioritized AI use as a means to manage public speaking anxiety. Practicing with an AI system, which provides a non-judgmental and private environment, was reported to reduce stress and build confidence before actual presentations [4, 13, 20, 39, 47]. "Practicing with an AI app makes me less nervous than practicing with a person. It's private, and I can make mistakes without feeling judged" (P5). This perception aligns with findings that technology-enhanced language learning can significantly reduce public speaking anxiety among EFL learners [4].

3.2. Diverse AI Utilization Across SRL Phases

Learners utilized AI tools across the different phases of self-regulated learning – forethought, performance, and self-reflection [49] – demonstrating a sophisticated integration of technology into their learning processes.

- Forethought Phase (Planning and Task Analysis): In the planning stage, AI was primarily used for brainstorming, content organization, and language preparation.

  - Content and Outline Generation: As noted in Section 3.1, learners extensively used generative AI (e.g., ChatGPT) to create presentation outlines, generate topic ideas, or refine key messages [8, 12, 23, 24]. This proactive use of AI supports learners in defining the task, a crucial step in SRL [49].

  - Vocabulary and Phrase Acquisition: AI tools were employed to search for topic-specific vocabulary and common presentation phrases, or to rephrase sentences for better clarity and impact [20, 43]. "I ask ChatGPT for synonyms or alternative ways to say something more formally in a presentation" (P9).

  - Pronunciation Rehearsal: Even before full delivery, learners might use speech recognition features to practice challenging words or phrases in isolation [22, 47].

- Performance Phase (Execution and Monitoring): During the actual practice and delivery phase, AI tools served as real-time or near real-time feedback mechanisms.

  - Simulated Practice Environment: Learners used AI-powered applications that simulate presentation scenarios, allowing them to practice their delivery multiple times [13, 30, 41]. "I use an app that listens to me and tells me if I sound confident or if my pace is too fast" (P14). This provides a low-stakes environment for repeated practice, crucial for skill automatization [32].

  - Automated Speech Evaluation: Tools with speech recognition and AI evaluation capabilities provided instant feedback on pronunciation, intonation, fluency, and even emotional tone [21, 22, 47]. This immediate feedback loop is critical for self-monitoring and adjusting performance, a key component of SRL [49]. "The AI tells me exactly which words I mispronounced, so I can go back and practice them immediately" (P7).

o Grammar and Lexical Correction: Some AI tools provided on-the-fly corrections for grammatical errors during spoken practice or offered suggestions for improved sentence structure.

• Self-Reflection Phase (Evaluation and Adaptation): Post-performance, learners engaged with AI tools for critical self-evaluation and to inform future learning strategies.

o Detailed Performance Analytics: AI applications generated comprehensive reports on various aspects of their presentation, including speaking rate, pause frequency, vocabulary range, and grammatical accuracy [21, 22, 47]. This data-driven feedback enabled learners to objectively assess their performance. "After my practice, the app gives me a score and highlights all my weaknesses, which helps me know what to focus on next time" (P2).

o Personalized Study Plans: Some learners used AI to help them identify specific areas for improvement based on their performance data and then generated tailored practice exercises or resources. This demonstrates adaptive strategy use, a hallmark of advanced SRL [49].

o "What If" Scenarios: Participants also mentioned using generative AI to reflect on potential audience questions or challenging scenarios, preparing them for spontaneous interaction during actual presentations, thus enhancing their metacognitive knowledge of the task [10].

3.3. Perceived Affordances and Limitations of AI Integration

Learners highlighted numerous benefits (affordances) and certain limitations when integrating AI into their self-regulated presentation skill development.

• Affordances:

o Accessibility and Convenience: AI tools offer 24/7 access to practice opportunities and feedback, overcoming limitations of teacher availability or peer schedules [17, 23, 31, 38]. This flexibility supports online and blended learning environments [7, 16].

o Personalized and Instant Feedback: Unlike traditional methods, AI can provide immediate, objective, and specific feedback on various linguistic and delivery aspects, tailored to the individual learner's performance [21, 22, 47, 50]. This instantaneity is crucial for effective SRL cycles [49].

o Reduced Anxiety and Safe Practice Environment: The non-judgmental nature of AI systems creates a safe space for learners to practice repeatedly without fear of embarrassment or criticism, significantly reducing public speaking anxiety [4, 13, 39, 47].

o Enhanced Autonomy and Metacognition: AI tools empower learners to take greater control over their learning process, fostering autonomy and promoting metacognitive reflection on their strengths and weaknesses [9, 11, 20, 33, 43].

o Cost-Effectiveness: Many AI tools are free or more affordable than private tutoring, making them accessible to a wider range of learners.

• Limitations:

o Authenticity Concerns: While AI offers valuable practice, some learners expressed concerns about the authenticity of AI-generated interactions or feedback, especially for nuanced communicative aspects like cultural appropriateness or genuine human connection [3, 14, 28]. "It's good for grammar, but can it really tell me if my jokes land, or if I'm connecting with the audience?" (P1). This points to the need for human-machine interaction conceptualization [6].

o Over-reliance and Lack of Critical Thinking: A few participants admitted to potential over-reliance on AI for content generation, which could hinder their own critical thinking and original idea development [24, 26]. "Sometimes I just let ChatGPT write everything, and then I realize I haven't really thought deeply about my topic" (P10).

o Ethical Considerations and Bias: Although not directly experienced, some learners were aware of broader discussions around AI ethics, data privacy, and potential biases in AI outputs, influencing their trust in the tools [24, 26, 38, 42].

o Limited Feedback on Non-Verbal Cues (beyond basic speech analysis): While AI can analyze voice patterns, feedback on complex non-verbal communication (e.g., eye contact, gestures, stage presence beyond basic movement) is still limited compared to human observation

[18].

DISCUSSION

The findings of this study underscore the transformative potential of AI in fostering self-regulated learning among EFL learners, particularly in the demanding domain of presentation skills. The strategic prioritization of linguistic accuracy, fluency, content, and anxiety reduction highlights learners' pragmatic approach to leveraging AI to address their most pressing communicative challenges. This resonates with prior research demonstrating AI's effectiveness in improving L2 speaking proficiency and reducing anxiety [4, 13, 30, 41, 47].

The utilization patterns observed across the forethought, performance, and self-reflection phases of SRL confirm Zimmerman's model [49], showcasing how AI can be integrated into each stage. In the forethought phase, AI functions as a powerful planning and conceptualization aid, reducing cognitive load and helping learners structure their thoughts and language efficiently [23, 24, 34]. This proactive use aligns with metacognitive knowledge and strategic processing in L2 learning [10]. During the performance phase, AI's ability to provide instant, objective, and personalized feedback on pronunciation and fluency is particularly valuable, offering an accessible alternative to human teachers or peers who may not always be available or possess the specialized analytical capabilities of AI speech evaluation programs [21, 22, 47, 50]. This immediate feedback loop is crucial for the self-monitoring and control aspect of SRL [49]. Finally, in the self-reflection phase, AI provides detailed analytics, enabling learners to critically evaluate their performance and identify specific areas for improvement, thus promoting adaptive strategy use and fostering deeper metacognitive awareness [9, 11, 20, 33, 43].

The perceived benefits of AI, such as accessibility, personalization, and anxiety reduction, strongly support the integration of these tools into EFL pedagogy. The privacy afforded by AI practice environments is a significant factor in mitigating public speaking anxiety, a common impediment for EFL learners [1, 4, 39]. This aligns with broader trends in technology-enhanced language learning that promote autonomy and flexible learning pathways [7, 17, 35]. The ease of access to practice opportunities also enhances motivation and willingness to communicate, creating a positive feedback loop for learners [13, 19, 30, 41].

However, the identified limitations, particularly concerns about authenticity and potential over-reliance, necessitate careful consideration. While AI can simulate communicative interactions, it may not fully capture the nuances of real-world human communication, including non-verbal cues and socio-pragmatic subtleties [3, 14, 18]. Educators must guide learners on the appropriate and ethical use of AI, emphasizing that AI should serve as a tool to enhance their own thinking and learning, not to replace it [24, 26, 31, 38, 42]. This calls for the development of AI literacy among learners, equipping them with the critical skills to evaluate AI outputs and integrate them judiciously into their learning processes [26]. Teachers also need to be prepared for the implications of generative AI [24, 25, 36, 48].

From a pedagogical perspective, the findings suggest a move towards blended learning models that strategically integrate AI tools with traditional classroom instruction and human feedback [7, 16]. Teachers can explicitly teach learners how to leverage AI tools for specific SRL phases in presentation development, for instance, by guiding them on effective prompting for content generation or how to interpret AI-generated performance reports. Collaborative learning activities, where AI is used as a shared resource or "co-creator" for content development, can also be beneficial [16, 27, 46]. Furthermore, the findings highlight the need for educational institutions and AI developers to collaborate in creating more sophisticated AI tools that address current limitations, such as providing more nuanced feedback on non-verbal communication and designing authentic conversational scenarios that go beyond scripted interactions [3].

Limitations and Future Research: This study's qualitative nature, while providing rich insights, limits the generalizability of the findings to a broader EFL population. Future research could employ mixed-methods approaches, combining qualitative insights with quantitative data from larger samples to measure the direct impact of AI-enhanced SRL on presentation skill improvements. Longitudinal studies could also track learners' evolving priorities and utilization patterns over time, and explore the long-term effects of AI integration on SRL development and communication competence. Furthermore, comparative studies across different cultural contexts could shed light on variations in AI adoption and perceptions given differences in language learning approaches and national identities [14, 29].

CONCLUSION

This study provides a comprehensive understanding of how EFL learners prioritize and utilize AI tools to self-regulate their learning in the context of presentation skills development. It demonstrates that learners strategically employ AI for enhancing linguistic accuracy, improving fluency and delivery, aiding content generation, and crucially, managing public speaking anxiety. These utilization patterns are woven throughout the SRL phases of forethought, performance, and self-reflection, highlighting AI's versatile role as a personalized, accessible, and anxiety-reducing learning companion.

While the affordances of AI in fostering learner autonomy and providing instant feedback are substantial, educators and AI developers must address concerns related to authenticity, over-reliance, and ethical implications. Moving forward, the pedagogical integration of AI should focus on cultivating AI literacy, promoting critical engagement with AI outputs, and fostering a synergistic human-machine interaction. By strategically leveraging AI, educators can empower EFL learners to become more effective, self-directed communicators, ultimately enhancing their proficiency in delivering impactful English presentations in an increasingly AI-driven world.

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