

Transformative Potential: AI Tools in ESL Education - A Survey- Based Analysis

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Abstract:

Artificial intelligence (AI)'s rapid evolution is causing a fundamental shift in the educational landscape, and this change is significantly influencing English language learning. This survey-based research presents a brief analysis, drawing upon the responses of ESL students and teachers conducted on a small scale, to explore the profound impact of AI tools on the teaching and learning of English as a Second Language (ESL). The survey comprehensively explores the utilization of AI tools, including their perceived benefits, encountered challenges, and overall effectiveness in ESL instruction. In summary, this research highlights the promising role of AI tools in improving ESL education. While it's difficult to restrict the use of AI, raising awareness about its benefits and judicious usage in the education market is essential.

Introduction:

Chat GPT defines Artificial Intelligence (AI) as the simulation of human intelligence in machines that are programmed to think, learn, and perform tasks typically requiring human intelligence. These tasks include problem-solving, understanding natural language, recognizing patterns, making decisions, and adapting to new situations. Kushmar et al. (2022, p. 263) mentions that “The advantages of artificial intelligence are undeniable: the ability to process vast amounts of information in a short time, increase efficiency, and convenience, eliminate long-term processes and automate the usual with no fatigue.”

AI also plays a very important role in the field of education. In English as a second language (ESL) education, AI tools have the potential to revolutionize the way we teach and learn. For students AI provides personalized learning, Real-time feedback, Increased engagement. And for educators AI provides increased efficiency, effective communication, ease in assessment, lesson planning, grading and also reduces their workload.

Artificial Intelligence (AI) tools offer a range of opportunities to enhance Language Skills (LSRW). Language learning apps, such as Duolingo leverage AI for speech recognition and pronunciation assessment, aiding in listening and speaking skills development.

AI-powered grammar and spell checkers, like Grammarly, assist in improving writing skills, while translation tools and content generators support reading and writing comprehension. Simultaneously, AI-driven models like Chat GPT have revolutionized content generation, generating human-like text in response to prompts and assisting in paraphrasing existing content while preserving the original meaning. Additionally, AI-powered paraphrasing tools like Quillbot provides efficient ways to rephrase sentences and paragraphs, making them invaluable resources for content creators. BARD on the other hand, focuses on enhancing the fairness and accuracy of AI-generated content, ensuring that it is free from biases and maintains

ethical standards. These AI-driven innovations empower language learners and content creators alike, enhancing their abilities and productivity across various language-related tasks.

In an increasingly interconnected world, ESL (English as a Second Language) education holds immense importance as proficiency in English opens doors to global opportunities. Therefore, the effective utilization of AI tools can greatly facilitate the learning of the English language. This research article delves into the impact of AI tools in ESL education, aiming to understand how they influence teaching and learning. With the growing adoption of AI tools in ESL classrooms, it becomes crucial to assess their effectiveness rigorously. This survey-based analysis focuses on the experiences and outcomes of ESL learners and educators who have embraced AI-driven technologies.

Literature Review: -

Artificial intelligence (AI) has become an indispensable tool in education, offering numerous benefits to both students and educators. This review explores the impact of AI in education, with a focus on language learning, teaching effectiveness, and student engagement.

Kushmar et al. (2022) conducted a survey among 418 students from Ukrainian universities to gauge their attitudes toward AI in language learning. The findings revealed that students have a good understanding of AI but also harbour concerns about cyber-attacks, privacy issues, and potential creativity loss. The study emphasizes the need for human expertise in creating high-quality learning content and suggests that AI should complement rather than replace it.

Alhalangy & AbdAlgane (2023) examined the impact of AI tools on EFL (English as a Foreign Language) teachers in Saudi Arabia. Their study involved (45 total) male and female teachers and found that AI tools enhance teacher-student interaction. It highlights the importance of raising awareness among educators and students about the benefits of AI tools in education.

Rebolledo Font De La Vall & González Araya (2023) conducted a review of scientific literature to analyse the opportunities and challenges of AI language learning tools. Their findings suggest that advancements in natural language processing algorithms and learning algorithms hold the potential for more powerful AI learning systems.

Fitria (2021) provides an overview of various AI tools, including Google Translate, Text-to-speech technology, English ABLE, Orai, ELSA, Chatbots, Duolingo, and Neo, highlighting their functions in language learning and enhancement.

Rusmiyanto et al. (2023) discusses how AI tools, such as speech recognition systems and virtual tutors, effectively enhance learners' speaking and pronunciation proficiencies. Learners who received AI-guided feedback exhibited remarkable advancements.

Mohammed et al. (2023) explores the utilization of ChatGPT in higher education and emphasizes the importance of providing clear instructions for its proper use. The study suggests the potential benefits of ChatGPT in academic tasks and research.

Tseng & Warschauer (2023) argue for the importance of integrating AI-based tools into education, highlighting that banning them in the classroom would deprive students of essential opportunities to develop valuable skills, particularly for second language learners.

Nazari et al. (2021) conducted a randomized controlled trial (RCT) to investigate the impact of AI-powered writing tool Grammarly on EFL learners. The study found that Grammarly can improve self-efficacy, engagement, and emotions in EFL learners, suggesting the effectiveness of AI-powered writing tools for teaching non-native English speakers.

In conclusion, AI has the potential to revolutionize education by enhancing language learning, teaching effectiveness, and student engagement. While challenges and ethical considerations exist, AI-based tools, when used judiciously, offer promising opportunities for both students and educators. Further research and integration of AI tools into educational practices are essential to harness their full potential.

Methodology: -

1. Research Design

This study utilized a cross-sectional survey research design to investigate the transformative potential of AI tools in the context of ESL (English as a Second Language) education.

2. Participants

The study's participant pool encompassed individuals who are associated with VNSGU University or affiliated colleges, including English educators, master's degree students, and Ph.D. Research Scholars. In total, the survey received responses from 90 individuals.

The survey was distributed to two primary participant groups:

- 20 ESL Educators
- 70 Students (53 students pursuing Master's degrees, and 17 are Ph.D. research scholars in ESL education).

3. Data Collection

To gather responses, structured questionnaire was designed specifically for this study. The questionnaire was administered electronically through Google Forms, ensuring ease of access and efficient data collection.

4. Data Analysis

The data collected through the questionnaire were subjected to a descriptive-analytical methodology, with a specific focus on percentage analysis. The analysis aimed to assess the prevalence and distribution of responses among the participant groups.

Results and analysis: -

In the subsequent sections of this research paper, the results of the survey analysis are presented separately for two distinct participant groups: ESL educators and students pursuing Master's degrees and Ph.D. for each group, tables, figures are utilized to illustrate the percentage distribution of responses. These visual aids facilitate a clear understanding of the survey outcomes within each participant category.

Analysis of Students pursuing Master's degrees and Ph.D.: -

Questions related to the awareness, usage of AI tools, frequency, purpose of AI tools, benefits, experiences while using AI tools, personal opinions regarding AI tools were asked. When asked about the awareness of AI tools, 88.6% participants are aware about AI tools and only 11.4% participants are not aware about AI tools.

Table 1. Which AI tools have you used?

AI Application	Percentage of Users
DuoLingo	49.2%
ChatGPT	77.1%
BARD	8.6%
Google Translate	77.1%
Grammarly	54.3%
Quizlet	12.9%
Other	11.5%
None	7.1%

Based on the above statistical analysis, it is found that Chat GPT, Goggle Translate, Grammarly, Duolingo are popularly known among people compared to Bard, Quizlet.

Table 2. How often do you use AI tools to learn English?

Frequency of Usage	Percentage of Respondents
Frequently	32.9%
Not Applicable	11.4%
Never	8.6%
Occasionally	47.1%

According to this table 47.1 % participants use AI tools occasionally and 32.9 % participants use frequently.

Table 3. What specific AI tools or features do you find most beneficial in your language learning?

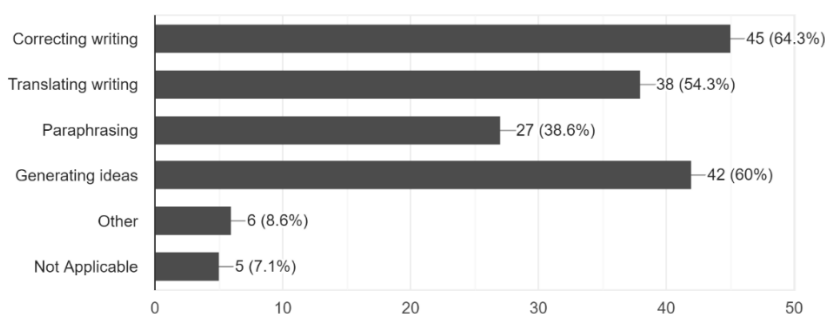
AI Tool/Feature	Percentage of Respondents
Interactive Language Exercises	38.6%
Personalized Lesson Recommendations	30.0%
Language Translation Assistance	40.0%
Helped Improve English Skills (Pronunciation, Vocabulary, Grammar)	64.3%
Other	5.7%
None	8.6%

As rightly pointed out in this table 64.3% students use AI tools to improve their English Skills such as pronunciation, Vocabulary and grammar.

Figure:-1

For what purposes do you use AI tools? (Select all that apply):

70 responses

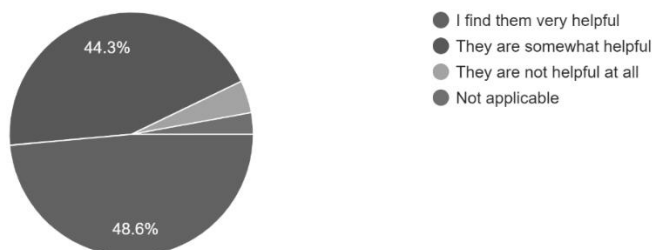


According to the above figure, maximum participants are using AI tools for correcting writing (64.3%) and generating ideas (60%).

Figure:- 2

How do you feel about using AI tools in your ESL learning?

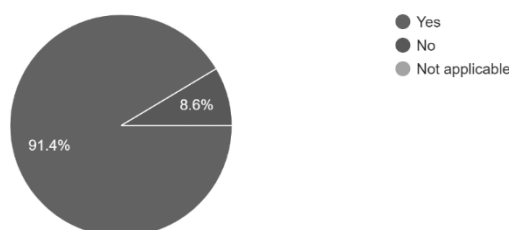
70 responses



Based on the statistical results, it is found that 48.6 % of the participants have found AI tools very helpful and 44.3% participants have found AI tools somewhat helpful.

Figure:- 3

Would you recommend using AI tools to other English language learners?
70 responses



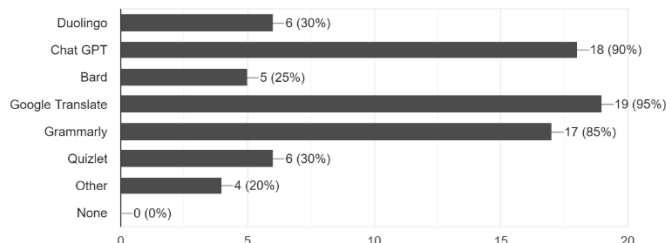
As a result of the above figure, it is shown that 91.4 % of the participants have agreed to recommend AI tools to other English Language Learners and 8.6% have chosen not to recommend AI tools to other learners.

b) Analysis of Educators.:-

Questions related to the awareness, usage of AI tools, frequency, purpose of AI tools, benefits, experiences while using AI tools, personal opinions about AI tools were asked. When asked about the awareness of AI tools all the participants are aware about it.

Figure:- 4

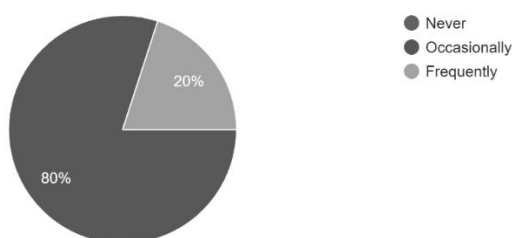
Which AI tools have you used? (Select all that apply):
20 responses



Based on the above statistical analysis, it is found that Chat GPT, Goggle Translate, Grammarly, are popularly known among educators compared to Bard, Quizlet.

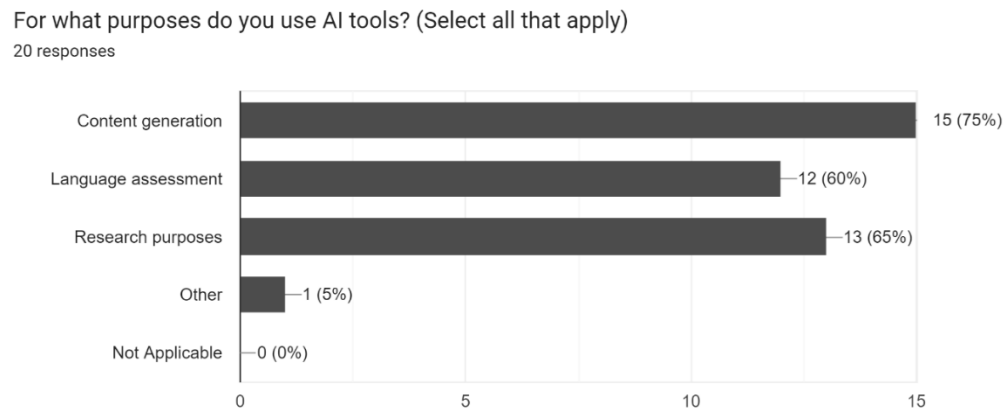
Figure:- 5

How often do you use AI tools to teach English?
20 responses



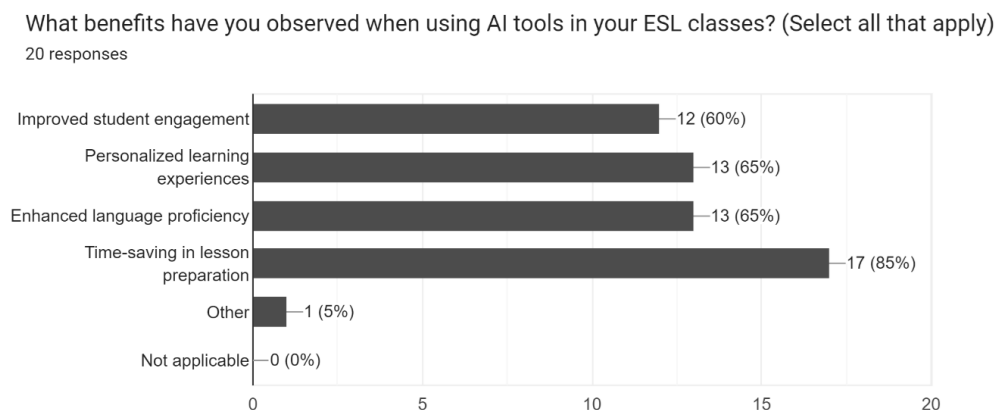
According to the above figure, 80% educators AI tools occasionally and 20% educators use frequently.

Figure:- 6



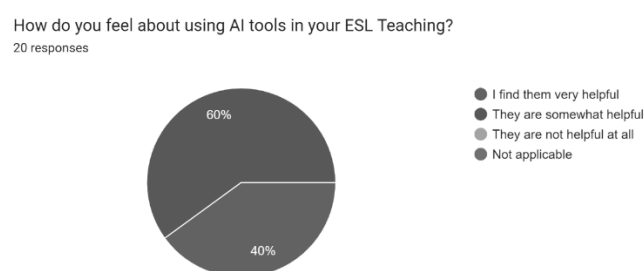
As presented in the figure maximum educators are using AI tools for content generation (75%).

Figure:- 7



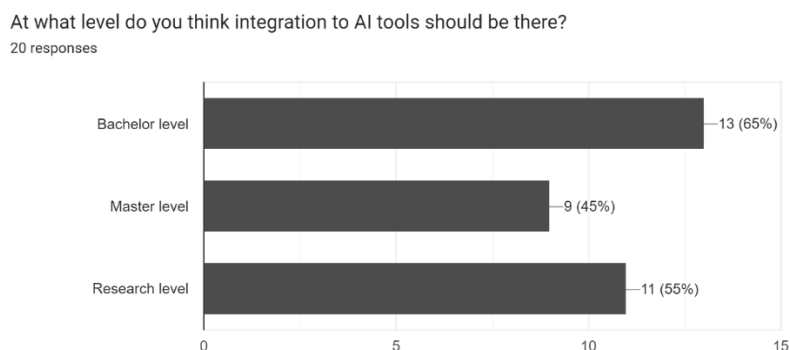
Based on the above statistical analysis, it is found that 85 % of the participants are using AI tools for lesson preparation as it saves time.

Figure:-8



AI tools are very helpful to 40% participants and they are somewhat helpful to 60% participants.

Figure :- 9



As per the statistics we can interpret that integration of AI tools according to 65% participants should begin at bachelor level.

Discussion: -

In recent years, AI tools have become increasingly prominent as powerful aids in a variety of educational and research-related tasks. Referring to the results outlined above and data on the Tables and figures suggest that these tools have proven their effectiveness in numerous areas, including correcting writing, translating text, paraphrasing, and generating ideas. Furthermore, AI tools have demonstrated their ability to enhance language proficiency, making them versatile assets in academia.

For educators, AI tools offer substantial benefits. They can improve student engagement by providing dynamic learning experiences and personalized content. Additionally, these tools facilitate lesson preparation and content creation, streamlining the teaching process. The positive outcomes of integrating AI tools into education are evident, and they present significant advantages for both educators and students.

To ensure the optimal utilization of AI tools in educational settings, it is essential to raise awareness among students about the diverse types and applications of these tools. Proper training workshops organized by educational institutions can play a pivotal role in helping students harness the full potential of AI tools. Students have expressed a clear need for formal instruction on using AI tools effectively, and educators also suggested that integrating AI tools into the educational process should begin at the bachelor's level to ensure students become comfortable with their use.

Moreover, ethical considerations are of paramount importance when utilizing AI tools. Both students and educators should receive guidance on ethical standards and responsible

usage to ensure that AI tools are employed ethically and in ways that benefit the learning process.

Conclusion: -

In conclusion, the integration of AI tools into education and research holds immense promise. Above discussion has highlighted the positive impact of AI tools on various academic tasks for student's engagement, and has proved to be valuable assets for educators.

To maximize the potential of AI tools, several recommendations emerge. It is crucial to organize formal training workshops for both students and educators to equip them with the necessary skills to leverage AI tools effectively. Furthermore, establishing clear ethical guidelines for AI tool usage is essential to ensure responsible and ethical practices.

Continuous improvements to AI software are necessary to enhance the overall learning experience, and syllabi should be adjusted to accommodate AI tool usage seamlessly. Encouraging educators to experiment with AI tools in their day-to-day activities will help them become familiar with their application and guide students better.

Thus, "If you can't beat them, join them" (Tseng & Warschauer, 2023, p. 5). AI-generated writing is far too strong to beat – but we can, and must, teach our students how to partner with it. With these measures in place, AI tools can become indispensable components of the educational and research landscape, benefiting both learners and educators and contributing to improved learning outcomes. To sum up, it's crucial to recognize that the conclusions presented in this study stem from data collected from a relatively limited group, which hinders their applicability to broader populations. Larger samples could yield divergent outcomes. Nevertheless, the study indicates that AI tools can serve as a beneficial resource for students, and for educators though it should not be seen as a substitute for human critical thinking, research, and writing abilities.

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