Effectiveness of ChatGPT vs. Perplexity AI in English Language Learning at the University of Serambi Mekkah

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Abstract

This study aims to compare the effectiveness of ChatGPT and Perplexity AI in the English Language Learning. It employs a mixed-method approach to determine the effectiveness of the two AI tools, ChatGPT and Perplexity AI, in improving English language learning at the University of Serambi Mekkah. Questionnaires and interviews were used to collect data. The results showed that 73.3% of participants favored the use of ChatGPT because of its interactive features and easy navigation. Sixty percent believed that ChatGPT provides more accurate information as opposed to Perplexity AI. This helps to motivate the learners and boost their confidence in using the language. Their counterpart, Perplexity AI, was preferred by a minority of respondents (13.3%) for its speed and accuracy. In this respect, ChatGPT was rated by participants as "highly effective" in improving their English skills, and 40% were "highly satisfied". In contrast, only 26.7% considered Perplexity AI more effective and satisfying. Though ChatGPT is undeniably favored, the study acknowledges how Perplexity AI may serve as customized support, in satisfying specific needs regarding language learning. Both are very helpful for English language acquisition, though ChatGPT is favored because it is more appealing. These findings would be useful to educators in incorporating appropriate AI technologies into language curricula to meet various learners' needs and improve learning outcomes. This research has emphasized how AI tools support the more conventional ways of teaching a language and gives useful insight that is relevant to further education.

1. Introduction

AI-driven tools have brought revolutionary changes in education, especially in language learning. Among many AI tools available today, there are two, ChatGPT and Perplexity AI, which stand tall in unique approaches to support English Language Acquisition. ChatGPT uses advanced natural language processing developed at OpenAI to engage learners in conversational interactions, enabling them to practice speaking and writing in an interactive environment. This engagement fosters language fluency and helps build learner confidence, as they can experiment with language in a low-risk setting. Brown (2022) emphasizes that the adaptable nature of AI systems provides personalized experiences tailored to individual needs. It can also be useful in a variety of learning environments by applying AI to analyze learner behavior and allow teachers to build customized pathways aligned with the proficiency level of each student.

Besides, Perplexity AI was designed by a team of researchers using a large text and code database to provide users with great detailed information about the answers to their questions. This is very important for learners of the language who need to increase their vocabulary and further their knowledge of English grammar and usage. These tools, on the other hand, gripped AI/education experts who are interested in radical changes in language learning, due to the belief that ChatGPT and Perplexity AI can only complement traditional ways of teaching with more interactive and personalized methods of learning. These AI tools provide learners with opportunities to practice the language in various contexts that help them realize their language goals more effectively.

Other studies also reveal that AI works in language learning. For example, Lee (2022) observed that the type of conversational AI, such as ChatGPT, is more engaging and immersive than a traditional one since improved motivation on the part of learners enriches the better retention of linguistic structures. Hence, an interactive type of question-and-answer format developed in ChatGPT may raise learning outcomes even higher. As one commenter from Harvard Business Review identified, ChatGPT makes people's productive capacity higher because one can get answers to questions in milliseconds and reports are generated on their own, freeing creative and analytical space for users. Harvard Business Review (2023) stated that such a potent tool as ChatGPT explains hard concepts in natural and understandable language, encouraging them to continue seeking its help. Pew Research Center (2023) stated that users, however, should be aware of ChatGPT's limitations since the information given out might not be updated and valid, and users need to be critical when using this technology.

ChatGPT offers various features that enhance its usability. It supports contextual conversations, allowing it to understand prior exchanges and make the dialogue feel easy. Users can customize response styles or tones and switch between different interaction modes, such as informative or casual. Additionally, its information retrieval function draws from a broad knowledge base, and integration with other applications increases its versatility. The user-friendly interface is designed for easy interaction, while natural language processing enables accurate responses. These features have made it favorable in language learning as well.

In contrast, Smith and Johnson (2023) assert that AI Perplexity is very instrumental in providing support with a specification of information such that it minimizes the cognitive overload of learners to a minimum and enables them to apply their language skills. Immediate responses and access to data are key aspects of language learning and crucial for students who find complex ideas difficult to understand. TechCrunch (2023) presents that Perplexity AI allows users to locate information more effectively and speedily than is possible with conventional search methods. Its interface is user-friendly, and the tool is contextually intelligent, making it easier for the user to locate an answer in very little time. According to Forrester Research in 2023, in business settings, Perplexity AI increases team productivity by furnishing them with necessary information and analysis faster. Consequently, this helps the professional make better and quicker decisions. In educational contexts, Nur Fitria (2024) reports that Perplexity AI is used by students to support their learning processes, providing not only answers but also clear explanations, making it a valuable resource for learners of various levels. Nevertheless, Klakow (2022) reported that users need to verify the accuracy of information provided by Perplexity AI, as data generated can sometimes contain errors or biases, making it vital for users to confirm information before relying on it entirely.

Perplexity AI offers several notable features. It supports question-based searches, allowing users to ask questions directly and receive precise answers with source references for verification. Its interactive user interface simplifies information retrieval, while natural language processing capabilities allow for effective interpretation and response to user queries. Perplexity AI organizes information clearly and concisely, adding relevant details for better context. Finally, integration with other platforms enables seamless interaction with various tools, enhancing the user experience. As educational institutions increasingly integrate technology into language curricula, understanding the comparative effectiveness of ChatGPT and Perplexity AI is essential for maximizing their potential in language learning. This article aims to explore the functionalities, advantages,

and limitations of both platforms, drawing on empirical research and user experiences to provide insights that can guide educators and learners in making informed choices.

1.1 Literature Review

AI integration into education has revolutionized the way languages are taught, especially within higher learning institutions. ChatGPT and Perplexity AI have distinct features that answer different learning needs, and this means a double advantage for both the students and the educator. This review attempts to extract, from their capabilities, strengths, and weaknesses, how these AI technologies can be gainfully utilized to achieve improved proficiency in the English language. ChatGPT, developed by OpenAI, is a model for conversational AI that produces human-like text based on user input. It is relatively effective at generating interesting dialogues and explaining things in detail, thus being more suitable for interactive learning experiences (Kohnke et al, 2023). Its ability to maintain context across different conversations allows users to go in-depth into a topic, which can be particularly helpful for language learners who need practice in conversational skills.

Then, Perplexity AI operates more like an advanced version of an Internet search engine, retrieving information from various online sources, including academic papers and social media platforms. To user queries, it provides accurate answers supported by cited sources, adding credibility to the information it presents (Iorliam & Ingio, 2024). This is a very crucial capability for the student researchers or in search of valid references on their study subjects. While Perplexity can also handle conversations, its main idea still lies in information retrieval rather than dialogical creation. In evaluating ChatGPT and Perplexity AI for effectiveness in the learning of the English language, several factors come into play. The latter is effective in provoking creativity and critical thinking from the interactive format of this chatbot. They can enact a role-play scenario or request an explanation of certain grammatically complicated structures, which may allow for deeper understanding and retention of concepts. Its ability to generate various content types, such as essays or creative writing prompts, encourages learners to practice writing skills extensively.

Besides, Perplexity AI excels in the area of updating information and factual accuracy. For learners who want to enhance their research skills or get help with academic writing, by having Perplexity drawn from a wide array of sources, students can access relevant materials quickly. This feature not only aids in language acquisition but also teaches students how to critically evaluate sources, which is an essential skill in academic settings. The effectiveness of AI tool adoption for language learning is a matter of user experience. ChatGPT offers a more conversational interface that feels more native to users who are used to chat applications. The ability to interact dynamically with the AI makes it appealing to students who prefer a less formal approach to learning. Besides, ChatGPT's mobile app enhances accessibility, allowing learners to practice their English skills anytime and anywhere.

In this regard, Perplexity AI is more like a search engine from an interface perspective, which could feel not as exciting for users perhaps anticipating conversational experiences. On the other hand, its structured responses and source citations can be very beneficial to students who value accuracy over interaction (Iorliam & Ingio, 2024). The ultimate choice between these two tools may lie in personal preferences over learning styles- whether one prefers interactive dialogue or structured information retrieval. Both ChatGPT and Perplexity AI have their own merits, which make them helpful in learning a new language. While the conversational nature of ChatGPT promotes an interactive atmosphere suitable for practicing spoken English and achieving fluency, it may lack precision in citation or sourcing data, which might lead to misinformation if users do not cross-check the same.

Perplexity AI's strength lies in its ability to provide reliable information from various sources quickly. This feature is especially useful for learners conducting research or seeking clarification on topics. However, its reliance on external sources means it may not always offer comprehensive explanations or engage users as dynamically as ChatGPT does. Additionally, both tools are prone to generating inaccurate information or "hallucinations," highlighting the need for users to critically evaluate AI outputs. Integrating ChatGPT and Perplexity AI into the English language curriculum at the University of Serambi Mekkah presents significant opportunities for enhancing student learning outcomes. By effectively utilizing these tools, educators can

create a blended learning environment that combines interactive dialogue with rigorous research practices. For example, instructors could encourage students to use ChatGPT for creative writing assignments while utilizing Perplexity AI for research projects requiring reliable sources.

Furthermore, training sessions could be organized to familiarize students with both tools' functionalities, enabling them to maximize their potential benefits. As students become adept at navigating these AI platforms, they are likely to develop greater independence in their learning processes—an essential aspect of higher education. In conclusion, both ChatGPT and Perplexity AI offer unique advantages that can significantly enhance English language learning at the University of Serambi Mekkah. While ChatGPT fosters an engaging and interactive learning environment ideal for developing conversational skills, Perplexity AI provides reliable information retrieval essential for academic success. By leveraging the strengths of both tools within the curriculum, educators can create a comprehensive approach that addresses diverse student needs and promotes effective language acquisition strategies. As technology continues to evolve, ongoing research will be crucial to assessing the long-term impacts of these AI tools on language learning outcomes.

2. Research Methods
2.1. Research Design

The research employed in this study is a qualitative approach focusing on postpositivism given the discovery of conditions existing in everyday contexts with the researchers as main instruments (Sugiyono, 2010). Thus, the type of used research provides high flexibility, enabling richer and dense interpretation of meanings and understanding of broad and intricate social phenomena without letting the rigid framework impose strict limitations on the process. To this end, the comparative case study approach is used to investigate and compare students' impressions of ChatGPT and Perplexity AI in improving English language learning. According to Baxter and Jack (2008, as cited in Utami Lubis and Hz, 2024), a case study as an approach enables the researcher to look at the phenomena in context because a case study introduces a variety of perspectives of the phenomenon using several sources of information. This approach affords an all-round view by the students of these AI tools as well as their efficiency in their learning process. For a better understanding of this case study, this paper employs both quantitative and qualitative research approaches. Qualitative data is collected mainly through the face-to-face administration of semi-structured interviews with an emphasis on the experiences of students when using ChatGPT and Perplexity AI. Measuring the numerical data is done quantitatively using several servers where a questionnaire is used to determine the satisfaction level, perceived effectiveness, and time saved when using these tools. Such a mixed approach enables one to get a better view of the extent to which educational technologies such as ChatGPT and Perplexity AI can be useful in teaching English at the University of Serambi Mekkah.

2.2. Participants and Techniques of Data Collection

This study utilized purposive sampling in selecting 15 English language students from the cohort 2022, studying at the University of Serambi Mekkah. The participants were selected based on their proficiency in English and their willingness to take part in the research. All of them were actively enrolled in their respective English language classes. In this modern university environment with wide access to the internet, this qualitative research depended on two major methods of data collection: a modified questionnaire and semi-structured interviews. The questionnaire, adapted from existing studies on AI-assisted language learning, was designed to solicit students' perceptions, experiences, and preferences regarding the use of both ChatGPT and Perplexity AI. At the same time, semi-structured interviews explored students' learning processes, the challenges they encountered, and the strategies they adopted when working with these AI tools.

2.3. Technique of Data Analysis

The gathered data underwent thematic analysis to uncover prevalent themes and patterns concerning the efficacy of ChatGPT and Perplexity AI in the realm of English language education. The themes were compared and contrasted to determine the respective strengths and weaknesses of each tool.

3. Results and Discussion
3.1 Results

Table 1. AI Tools Primarily Used by Respondents in English Language Learning.

AI Tools	Percentage	Number of Respondents
ChatGPT	73,30%	11
Perplexity AI	13,30%	2
Both	13,30%	2
None of the Two	0	0

The data presented indicates that 73. 3% of the respondents prefer using ChatGPT, making it the most favored tool among them. Perplexity AI secures the second spot, being selected by 13. 3% of the participants, while Neither is favored by an equal percentage of 13. 3%. Surprisingly, just a small fraction, amounting to 13. 3%, utilize Both ChatGPT and Perplexity AI for their English language learning.

According to the data, it is evident that ChatGPT holds a notable edge in popularity as an AI tool for English language learning. The preference among learners for this is likely due to its user-friendly interface, advanced capabilities, and wide range of applications. Nonetheless, Perplexity AI and similar tools possess their unique strengths, being potentially favored by individuals depending on their specific requirements and preferred ways of learning.

Table 2. The Responses Regarding Specific Purposes for Using ChatGPT and Perplexity AI.

Purpose of Using AI Tools	Number of Respondents	Percentage (%)
Writing assistance (essays, reports)	6	40%
Grammar correction	5	33,3%
Vocabulary learning	5	33,3%
Conversation practice	3	20%
Research and information retrieval	11	73,3%

The data provided indicates that 15 people have responded to a statement or question regarding the ease of understanding AI's perplexity. Among the respondents, 60% or 9 people confirmed their agreement with the statement, whereas 26. 7% or 4 individuals expressed disagreement. It is quite intriguing that 13. 3%, which equals 2 persons, shared a neutral viewpoint regarding the issue.

From the data, it is clear that most participants find the Perplexity AI easy to grasp. Yet, a considerable number also maintains contrasting opinions, showcasing the wide array of viewpoints on this subject. It's crucial to realize that while most people agree, there is still a significant portion of participants who either have a different opinion or remain neutral.

Table 3. The Respondents' Perceptions Regarding the Effectiveness of ChatGPT in Helping to Improve English skills.

Level of Effectiveness (Scale 1-5)	Number of Respondents	Percentage (%)
1 (Ineffective)	0	0
2	2	13,3%
3	6	40%
4	4	26,7%
5 (Very Effective)	3	20%

The data shows that 15 respondents have tried or commented on how useful ChatGPT is for developing one's English. Out of the subjects questioned, six people, or 40% of the subjects, showed huge satisfaction with ChatGPT because they ranked it as very effective at 5 points out of 5 maximums. Another 4 people or 26.7% were satisfied because they found ChatGPT to be effective (4 out of 5).

On the other hand, three participants comprising 20% of the participants reported ChatGPT to be somewhat effective, rating it 3 out of 5. This means the tool had some benefits but failed to fully meet their needs. Fully, 2 persons, which is 13. 3% of the participants found ChatGPT ineffective while none of the respondents felt it was entirely ineffective.

This suggests that a greater number of respondents considered ChatGPT a helpful tool for improving their proficiency in English. Even though for some it was a bit less effective, the general trend is that ChatGPT is viewed positively in language learning effectiveness.

Table 4. The Respondents' Perceptions Regarding the Effectiveness of Perplexity AI in Helping to Improve English Skills.

Level of Effectiveness (Scale 1-5)	Number of Respondents	Percentage (%)
1	3	20%
2	2	13,3%
3	4	26,7%
4	4	26,7%
5	2	13,3%

The data indicates that 15 people shared their thoughts on how Perplexity AI contributes to enhancing their English proficiency. Among these survey participants, 4 people (26. 7%) considered Perplexity AI to be highly effective (4 out of 5), demonstrating a significant level of satisfaction. Plus, three folks, which is around 20%, found it somewhat effective, with a rating of 3 out of 5. This indicates that although it had some benefits, it didn't completely live up to their expectations.

On the other hand, a couple of individuals (13. 3%) thought Perplexity AI was not as effective (2 out of 5), with no one deeming it entirely ineffective (1 out of 5).

From these findings, we can infer that most participants view Perplexity AI as a valuable resource for enhancing their English abilities, with a notable percentage considering it highly effective. Though a few found it to be somewhat less effective, the general trend shows that Perplexity AI has been positively perceived in its effectiveness for language learning.

Table 5. The Respondents' Perceptions Regarding A More Accurate Tool for Language Learning.

AI Tools	Percentage (%)	Number of Respondents
ChatGPT	26,7%	4
Perplexity AI	13,3%	2
Both are equally accurate	60%	9
Neither is accurate	0	0

The chart shows that 15 responded to a statement or question as to whether ChatGPT and Perplexity AI were more accurate for language acquisition. For those respondents, 60% or 9 decided that the best answer was ChatGPT provided more accurate information, while 26.7% or 4 respondents leaned toward Perplexity AI being more accurate.

It is important to note that 13. 3% or 2% of the participants believed that both tools were equally accurate, while no one doubted the accuracy of either tool.

From these, we can infer that most of the participants think ChatGPT gives more accurate information to learn the language than Perplexity AI. However, many also hold the opposite view, showing the complete spectrum of opinions regarding this topic. Again, although the majority are satisfied with ChatGPT, a fair number of participants believe that Perplexity AI is equally accurate or even more so.

Table 6. The Respondents' Perceptions About Whether the Feedback provided by ChatGPT is More Helpful than that from Perplexity AI.

Preference	Percentage (%)	Number of Respondents
ChatGPT is much more helpful	53,3%	8
ChatGPT is somewhat more helpful	13,3%	2
Both are equally helpful	26,7%	4
Perplexity AI is more helpful	6,70%	1

The data charted below shows that 15 subjects responded to a statement or question concerning how useful ChatGPT's feedback was compared to Perplexity AI. Of the total number of respondents, 53.3%, or 8 found the feedback from ChatGPT to be much more helpful than Perplexity AI. For 26.7%, or 4, the feedback was somewhat more helpful from ChatGPT.

On the other hand, 13.3% or 2 viewed feedback from both tools as equally helpful, while none of the respondents found the feedback from Perplexity AI more helpful.

From these results, it is fair to say that the majority of the respondents found ChatGPT more helpful in its feedback than Perplexity AI. However, an equal share of the proportion has differing views, showing that this is a controversial question. It should also be taken into consideration that even though ChatGPT was favored by the majority, a big number of the respondents are of the view that both tools are equally helpful in their feedback.

3.2. Discussion

It is observed that in the last few years, AI tools are tremendously gaining popularity in language learning, especially in English Language Education. This discussion aims to explore how two popular AI tools, ChatGPT and Perplexity AI, fare by analyzing feedback from students at the University of Serambi Mekkah. The results provide a good overview of students' experiences and preferences, thus showing how each tool uniquely contributes to their learning process.

In the realm of time efficiency when using ChatGPT and Perplexity AI, achieving an average score of 3,53% for ChatGPT and 3% for Perplexity AI signifies that these technologies have shown remarkable promise as incredibly efficient tools to assist students in their learning journey. This accomplishment showcases the impressive performance of these AI tools, not only in saving time, but also in enhancing student satisfaction and ease of use. Students at the University of Serambi Mekkah feel that these technologies can improve their comprehension and absorption of English language study materials, enabling them to manage their time more efficiently. With the integration of ChatGPT and Perplexity AI in the academic setting, there is potential for enhancing learning efficiency and offering students a more dynamic and top-notch learning experience.

In the assessment setting, a reduced rating for Perplexity AI responses points to struggles with comprehension, showcasing a significant hurdle in the technology's capacity to offer clear and easily understandable responses. The lower rating showcases that some students are not entirely satisfied with the quality of responses produced by Perplexity AI in the realm of English language learning. In contrast, ChatGPT garnered more positive feedback, especially for its capability to provide precise and contextually fitting replies. Students mentioned that they found ChatGPT to be more beneficial in offering feedback and explanations that aided their comprehension of English learning resources.

The research results show that both ChatGPT and Perplexity AI have a notable positive impact on improving the writing skills of students at the University of Serambi Mekkah. In detail, these AI tools offer explanations and answers that are readily understandable, as detailed in Table 1. The findings support the assertions made by prior researchers (Ahmadi, 2018; Kaur, 2019; Chen Hsieh et al. , 2017) in favor of incorporating technology in English language education to simplify various tasks. ChatGPT and Perplexity AI have shown to be very helpful in assisting students with their writing process. Both tools provide significant assistance, enhancing the accessibility and effectiveness of the learning process. This study adds to the increasing evidence indicating that incorporating AI technology like ChatGPT and Perplexity AI can act as a valuable asset in enhancing students' English language learning skills and overall academic achievement.

Respondent 1 from the existing data, it can be concluded that ChatGPT is the most widely used AI tool for learning English among respondents. Although Perplexity AI also has users, its popularity is not as big as ChatGPT. This suggests that ChatGPT may be easier to use, more featured, or better suited to the needs of most users.

The other result table 2 the data presented shows that the use of artificial intelligence (AI) tools has become very common, especially in the fields of information retrieval and writing. Most users utilize AI to search for data and information that is relevant to their needs, whether for academic, work, or just general knowledge. Apart from that, AI is also widely used to assist in the writing process, from designing the structure of writing to improving grammar and writing style. Another feature that is quite popular is the use of AI to enrich vocabulary and learn languages through conversation. This shows that AI has become a very helpful assistant in various aspects of our lives, making it easier for us to access information and increasing productivity. Software like Perplexity AI that is specifically designed to discover new knowledge further reinforces this trend, showing that AI users are not only satisfied with existing information, but also want to continue learning and discovering new things.

From respondent 3 testimony, it is observable that most of the respondents felt that ChatGPT was very effective in enhancing their English skills. The clarity and easiness of the explanation provided by ChatGPT helped them to understand the concepts of language that were difficult to comprehend. Besides, many other respondents were motivated to continue learning English because of the interaction with ChatGPT. This shows that ChatGPT can be very helpful for whomever wants to improve their English, be it students, professionals, or simply anyone interested in learning a new language.

Based on the survey results in table 4 that have been carried out, it appears that there is a positive perception regarding the effectiveness of Perplexity AI in helping users improve their English language skills. Most respondents think that AI is quite helpful for them in achieving these goals. However, interestingly, there is also a segment of users who give higher ratings, even stating that Perplexity AI is very significant in increasing the efficiency of their study time. With its ability to provide clear, concise and relevant answers, Perplexity AI not only helps users understand English concepts better, but also allows them to explore a wider range of topics in a relatively short time. This indicates that Perplexity AI has great potential as an effective English learning tool, especially for those who have limited time or want to learn independently.

Another perception in table 6, according to the findings of the survey carried out, tends to show a strong preference for ChatGPT over Perplexity AI regarding the quality of the feedback given. Most participants in the survey reported that ChatGPT gives much more relevant, constructive, and helpful feedback toward improving the quality of their work. This suggests that ChatGPT is more context-sensitive and accordingly catches the very gist of the question, providing more appropriate answers to the needs of the user. Several, however, felt that both could be used to great advantage: ChatGPT and Perplexity AI were both better in some cases, yet neither was particularly either superior or inferior. However, overall, the survey data shows that generally speaking, ChatGPT is more often selected as the main tool for receiving feedback and support on various forms of tasks. This is probably because ChatGPT can generate more natural and coherent text in a style that fits most language styles and conversation topics.

4. Conclusions

The findings indicate a strong inclination towards ChatGPT at 73%. Approximately 3% of the participants prefer it due to its user-friendly interface and interactive features that improve engagement and boost confidence in language usage. By comparison, merely 13. 3% of respondents preferred Perplexity AI, recognized for its capability in providing quick and accurate information. Participants highly rated ChatGPT, with 40% describing it as "very effective" for improving their English skills. Perplexity AI received favorable responses from 26 individuals. Seven percent of respondents found that ChatGPT provided more accurate information than Perplexity AI, also 60% agreed on this. While ChatGPT is clearly preferred, Perplexity AI is recognized as a helpful tool for learners in need of focused explanations and assistance. This highlights the importance of recognizing personal learning preferences when integrating AI tools into teaching methods. Basically, both ChatGPT and Perplexity AI demonstrate great potential to assist in the learning of English language. Nevertheless, the exceptional characteristics of ChatGPT have played a significant role in making it the top choice for numerous students. As educational institutions start using these technologies increasingly, it will be essential to understand both their benefits and constraints to improve their influence on language education.

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