Investigating ESL Learners' Perception and Problem towards Artificial Intelligence (AI) -Assisted English Language Learning and Teaching

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Abstract

The contemporary language learning strategy, Artificial Intelligence (AI) Assisted Language Learning (AI-ALL), incorporates AI-powered applications to support learners' learning activities. Many scholars have been experimenting with AI applications concerning activities relevant to education. The major objectives of this study are 1) The ESL learners' perspectives concerning AI-assisted English language learning and teaching; 2). ESL learners' problems concerning artificial AI-assisted English language learning and teaching. The present investigation employed a quantitative methodology utilizing survey instruments to accumulate distinct information from 81 engineering stream students including essential primary research objects. A survey with a 5-point Likert Scale was administered to collect the data. According to the study, most of the students had favorable perceptions toward using AI-powered tools, particularly while learning English. The major problem is the lack of quality in AI-powered language-learning apps on smartphones. However, it is envisaged that AI-powered apps in language learning would be deployed as one of the instructional media that might help learners learn English as a Second Language efficiently. The present study recommends further research to investigate thoroughly how experienced language instructors use AI-powered applications in their classrooms to build best practices for utilizing AI in teaching and learning in ESL environments.

Keywords: artificial intelligence, language learning, English as a second language, education, survey, likert scale, ai-powered applications

1. Introduction

Gen Z and Alpha witness an intriguing period in the era of technology ignited by competence in timesharing, high-powered, linkage, and plugged-in learning environment. Due to the recent advancements in regional and worldwide communication technology, there is a greater requirement for proficiency in English as a Second Language (ESL). A considerable emphasis should be given to developing diverse learning materials and approaches toward English language learning and teaching. Creative teaching strategies and appropriate materials are required to learn the English language in innovative ways. The Fourth Industrial Revolution has had a profound impact on communication settings, as well as the educational system in particular (IR 4.0). Higher educational institutions are being pushed to introduce Education 4.0 as a follow-up to IR 4.0. A smart campus, cutting-edge teaching methods, elevated concentrations of creativity, welcoming learning environments, and ecologically responsible technologies are all combined in the Education 4.0 environment (Mansor et al., 2020). Intelligent technologies enhance everyone's quality of life to carry out some activities conveniently. Systems based on big data, deep learning, and artificial intelligence (AI) are being developed as new tools for enhancing and customized learning. As a consequence of the advancement of the Internet and other technologies, several pedagogical practices (such as online learning, classroom methods, instructional tactics, etc.) meant to enhance education have become more publicly accessible.(Gueye & Exposito, 2020).

The significance of Education 4.0 implications include incorporating Artificial Intelligence (AI) technology into the language curriculum. AI technology provides diverse learning materials and approaches to language learning and teaching, especially for ESL. The impact of AI induces a substantial paradigmatic change in language curricula. As a consequence, AI technology in language curriculum is considered Artificial Intelligence Assisted Language Learning (AI-ALL). Artificial intelligence (AI) technology utilization, particularly within and outside the classroom activities, may support learning objectives such as supporting various learning phases of difficulties and enhancing learners' accomplishment. According to Sandip (2019), teaching the English language, AI-based algorithms change the role of the instructor as facilitator and mentor to assist pupils. The core of every AI-based educational program is a subject matter expert, the function of the teacher cannot be dismissed. Teachers are capable of making the little manual adjustments required for maintaining and administering such AI-based technologies. Programs for teaching and learning the English language by using AI are only possible with assistance. The development team of AI-based software can greatly assist teachers in making changes to the program. It implies that the job of instructors has shifted from that of a leader to one of a guide who may instruct the pupils on how to use AI-based software.

Numerous individuals and language professionals could develop their ability to employ AI-powered applications, however, they may certainly require assistance. The researchers of this current study are enthusiastic about performing an inquiry based on this behavior due to the substantial study on the use of AI-powered applications in English language learning and the increased interest among students in applying their English language skills. The main contribution of this research is the exploration of ESL learners' perspectives and issues with AI-assisted language learning and instruction.

2. Objective of the Study

2.1 Aim

This study aims to investigate the perceptions and problems concerning artificial intelligence-assisted English language learning, with a focus on identifying the challenges faced by ESL learners in adopting and utilizing AI technology in the language learning process

2.2 Objectives

The objectives of this current study are given below:

- To explore the perceptions of ESL learners towards AI-assisted learning and identify the benefits and challenges of using AI technology in language learning, especially the English language.
- To investigate the problems faced by ESL learners in adopting AI technology for English language learning.
- To contribute to the existing body of knowledge on artificial intelligence in English language teaching and learning.

3. Review of Literature

3.1 Inception of Artificial Intelligence in ESL Learning

John McCarthy popularised the term Artificial Intelligence (AI) during a well-known Dartmouth College Workshop that took place in the summer of 1956. Artificial intelligence research began after World War II (Russell & Norvig, 2003, p.17). Artificial intelligence (AI) has advanced tremendously since the beginning of AI research in the 1950s when Turing developed the famed Turing Test to determine if machines could think. There is a philosophical difference between Weak AI and Strong AI, according to early tendencies in AI research. Strong AI is the idea that AI should be used to create systems that can understand people. Alternatively, it was considered weak to let systems operate without understanding the intricacies of human thought (Marr, 2022). While strong AI attempts to simulate human cognition and replace human authority, it has been perceived as a dangerous idea. This pattern recognition could not be expanded by early AI systems to complicated situations appropriate for language acquisition. The increased computational power accessible today is responsible for around 80% of the AI advancements during the decade preceding (Hof, 2015). The concept of AI in the twenty-first century has progressed during the previous fifty years in the following manner: AI is considered "a science and a set of computational technologies that are inspired by—but typically operate quite differently from—the ways people use their nervous systems and bodies to sense, learn, reason, and take action "(Stone et al., 2016). In the past, AI has been used primarily in several different industries. Some of these issues included computer vision, robotics, automated theorem proving, computer vision, natural language processing, automated programming, robotics, intelligent data retrieval, etc. These application fields have grown so much in recent years that it is conceivable to think of each one as a distinct field. It is more advantageous to conceive of AI today as a collection of core concepts that serve as the foundation for many of these applications (Ribeiro et al., 2021).

In 2016, the University of Stanford published a "100-year report on AI", it states that even though AI showed enormous potential for language acquisition, its early achievements were restricted by its inability to foster deep learning in systems like the Intelligent Tutoring System (ITS). AI is already prominent in many sectors of modern life, from self-driving automobiles to intelligent mobile applications (Stone et al., 2016). Artificial intelligence (AI) is indeed a system that could comprehend naturally occurring human speech, assess human speech, and apply flipped classroom model to the teaching and learning of languages. Additionally, it helps pupils be more effective and productive (Ali, 2020). Because of advancements in Natural Language Processing (NLP), networked learning capabilities, and the ability of technology to handle massive volumes of data, modern AI offers significant applications for language studies globally and second language studies in particular (Kannan & Munday, 2018). Computational linguistics is a terminology used to describe the discipline of representing language knowledge in AI systems. Most frequently, second language acquisition has been supported by the computational syntax area of computational linguistics. Natural language processing, which is a subfield of computer linguistics, involves automating the breakdown of grammatical structure into speech components (Dodigovic, 2007). In higher education, the paradigm of integrating AI with mobile teaching and learning (m-learning) is becoming increasingly popular (Pedro et al., 2018). AI in its more advanced form is reviving the possibility for autonomous learning (Rieland, 2017).

AI capabilities are used in intelligent computer-assisted language learning (ICALL) and instruction to support a variety of successful pedagogical strategies for teaching and learning foreign languages (Zawacki-Richter et al., 2019; Zhang & Zou, 2020). Considering that AI chatbots are dialogue-based systems for computer-assisted language learning, they come under the first category (Bibauw et al., 2019; Luckin et al., 2016). Text or speech-enhanced chat is how AI systems engage with their users, and voice interaction has made tremendous progress over the past three years (Nordrum, 2017). According to Luckin et al. (2016) Tutoring systems, systems that facilitate collaborative learning environments, and virtual reality systems were categorized into three functional groups for AI software applications in education. The chatbot was described as "an artificial construct that is designed to converse with human beings using natural language

as input and output" (Brennan, 2016). Chatbots have greatly boosted the quantity and complexity of learner language production, according to empirical studies on the integration of AI technology into Foreign Language (FL) learning (Golonka et al., 2014; Zhang & Zou, 2020).

Learning environments with AI-enabled innovations could benefit language instructors and learners. A subclass of technologies that employ artificial intelligence is used in computer-assisted language acquisition. The rapid advancement of big data management and natural language processing technology has made AI a substantial improvement in the teaching of foreign languages (Li, 2020). Every ESL student in the classroom will receive a customized lesson plan created by AI using the knowledge domain. By considering the competency level and language barriers of the learners, AI will utilize data from the knowledge area to create a customized course for each learner (Buddhima & Keerthiwansha, 2018). AI is beneficial to the field of language education. Artificial intelligence in academia can enrich the curriculum and enhance the way of teaching. At present, AI is gradually becoming more potent and has a big influence on the teaching of languages. AI makes second language learners become autonomous learners by including them more in the approach. The use of AI in language acquisition, particularly for learning the English language, makes it relatively simple. Many AI apps are accessible for interaction to execute certain tasks quickly. These AI programs are increasingly being used as language learning tools.

3.*2 Natural Language Processing in Artificial Intelligence*

Natural Language Processing (NLP), the most cutting-edge technology, becomes a key component for AI-powered apps to communicate with people using their languages. The application of NLP and its related domains makes language generation more practical. Natural Language Understanding (NLU) and Natural Language Generation (NLG) are the subfields of NLP. According to Grosz (1982), Natural language processing is the reader's or listener's responsibility; natural language generation is the responsibility of the writer or speaker. Even though these two areas share a lot of theory and technology, Natural Language Generation also has to be improved and modernized. This claims that for the generation system to decide what to generate at each step of contact, a strategy or model of the interaction's purposes is needed.

The objective of the NLP system in this situation is to convey the user's inquiry inherent meaning and purpose, which could be stated in casual conversation just as effortlessly as if the user were conversing with a referencing librarian. Even though it has so far only had a minor influence on Second Language Acquisition (SLA) and real-life language education, the use of NLP in the context of language learning offers huge potential for improving applications that will help both the language teaching-learning process as well as SLA research. The development of trustworthy categorization initiatives and analysis processes that pinpoint the traits that are important and significant for assessing learner language and analyzing language for learners will require more interdisciplinary cooperation between SLA and NLP (Meurers, 2021). NLP investigates the most effective computer strategies for analyzing, storing, sorting, and searching language. It analyses text, speech, translation, and other types of information. The application of NLP to enhance language acquisition seems natural (Nerbonne, 2003).

The combination of NLP and AI provides a wonderful atmosphere for autonomous language learning. NLP is used in a wide range of AI applications. Grammarly, Google Docs, Google Translate, and intelligent personal assistants like Siri, Alexa, Cortona, Bixby, Lyra, Jarvis, Robin, Elsa, Data Bot, Hound, etc. are examples of applications for NLP. These NLP and AI-powered applications involve language teaching especially, English language learning and teaching which is currently considered AI-assisted language learning. Google claims that 500 million people use Google Assistant each month, a voice-activated digital assistant that is now included in everything from smartphones to home speakers (Eadicicco & Clark, 2020). Scaling, cross-linguistic, and cross-domain algorithms are the core topics of Google's Natural Language Processing (NLP) research (Harel et al., n.d.) Google Assistant may be a useful tool for teaching foreign languages, especially when it comes to comprehension activities. When compared to using the conventional method of reading comprehension, using Google Assistant increased respondents' efficacy in terms of the number of questions they attempted and correctly completed (Sing et al., 2019). When it comes to quickly carrying out and finishing specific duties, Alexa is regarded as an efficient AI tool. Alexa and other intelligent personal assistants enable the meaningful practice of speaking and listening in a second language outside of the classroom, improving independent learning (Dizon & Tang, 2020).

With an Apple smartphone, Siri becomes a useful voice assistant to carry out specific tasks. Siri is a useful interactive tool made available by Apple. To assist people, Siri was created as a personal assistant that can respond to queries and serve as an "instructor." Since users may speak properly and accurately so that Siri can hear them, When mastering a second language, like English, Siri is a useful tool for enhancing the experience of the learner (Haryanto, 2019). Siri has the power to persuade individuals to put forth more effort to get the desired outcome. Writing ability is also taken into account regarding perceptions about the relevance of Siri's culture for learners to succeed in the study of English (Sudirman et al., 2020). Numerous levels of AI interfaces for second language learning are offered by Google Assistant, Alexa, Siri, Cortana, and Bixby. Many of these AI programs have been experimented with and assessed to see how efficiently they learn languages (N & Kumar N S, 2022). The most fundamental problem is the urgent need to digitalize learning settings using AI-powered applications to improve the teaching and learning process. Modern educational circumstances have evolved to reflect several technological advancements. To improve language learning and teaching, particularly in the English language, a range of AI-powered apps with NLP may be the best option.

4. Significance of the Study

This study intended to investigate the learner's perceptions and problems with artificial intelligence-assisted English language learning.

Understanding individual learning differences is intended to assist all those responsible for teaching English as a second language (ESL). Additionally, it could support individualized instruction and learning. It helps the learners to realize their potential to learn easily and effectively. Furthermore, it could aid learners in finding their methods and ways to become more independent learners. Teachers and researchers may be able to develop relevant AI-powered materials and activities by understanding students' perspectives and issues to assist students to improve their linguistic competency.

5. Research Questions

The following research questions are used to lead this study:

1. What are ESL learners' perceptions concerning artificial intelligence (AI) assisted English language learning and teaching?
2. What are ESL learners' problems concerning artificial intelligence (AI) assisted English language learning and teaching?

6. Research Method

6.1 Research Design

The study was conducted with a quantitative research design, and a descriptive research approach to investigate students' perceptions and problems towards Artificial Intelligence (AI) – Assisted English Language Learning.

6.2 Participants

The participants in this study were 130 second-year students from various engineering streams registered for the Technical Report Writing course at Vellore Institute of Technology, a deemed-to-be university in southern India. All the participants used several Artificial Intelligence powered applications such as robots, voice assistants, chatbots, web designs, speech recognition systems, gestures, faces, objects, and handwriting recognition systems for academics and their usage. Since all the participants are from engineering backgrounds it's obvious that they have been exposed to various kinds of technological innovations and inventions including AI applications in their course.

6.3 Instrument

According to Fraenkel et al., (2012, p. 393) Through the survey, data is gathered from a group of individuals to characterize some qualities or traits of the population, such as abilities, perspectives, attitudes, values, and knowledge. The researcher adopted and modified the research method (Nuraeni et al., 2020). In this study, researchers circulated questionnaires through Google Forms for nearly 130 second-year engineering students, but only 81 responded. The initial section of the questionnaire investigated the perceptions of students toward the use of AI-powered aides to help with English language learning. The problems with the usage of AI-powered applications for English language learning are covered in the second section of this inquiry. These surveys include two sections each with 20 items: the section on perception consists of 10 items, and the section on problems consists of 10 items. To gather quantitative data, a 5-point Likert scale was employed, with each category consisting of items starting from Strongly Agree (SA) = 5 to Agree (A) = 4 to Neutral (N) = 3 to Disagree (D) = 2 to Strongly Disagree (SD) = 1. A rating scale was used to classify the results of the questionnaire data analysis. The standard deviation and mean were determined by calculation. Then, it is evaluated using the following criteria (Best, 1981):

Table 1. Students Rating Scale

No	Students Level	Mean
1	Lowest (L)	$1.00 \leq \bar{x} \leq 1.50$
2	Low (Lw)	$1.51 \leq \bar{x} \leq 2.50$
3	Moderate (M)	$2.51 \leq \bar{x} \leq 3.50$
4	High (H)	$3.51 \leq \bar{x} \leq 4.50$
5	Highest (Ht)	$4.51 \leq \bar{x} \leq 5.50$

6.4 Data Analysis

IBM SPSS Statistics was used to carry out the majority of the statistical analysis. The researcher also used Microsoft Excel along with SPSS for data analysis. Further, the data was examined qualitatively to address the investigation objectives. Additionally, the description, categorization, and interpretation of survey data could be carried out. The data were evaluated with the help of a computer program utilizing mean and standard deviation as the statistics.

7. Results and Discussions

7.1 Demographic Data

Table 2, illustrates the demographics of participants in terms of gender and age.

Table 2. Demographic Data of the Participants

		N	Percentage %
1.	**Gender**		
A.	Male	62	76.5
B.	Female	19	23.5
	Total	81	100.0
2.	**Age**		
A.	16 - 20	78	96.3
B.	21 - 25	3	3.7
	Total	81	100.0

It is evident from table 2 above that there were 76.5% of male participants and 23.5% of female participants. Additionally, it shows that the participants' dominant age range (96.3%) was between 16 and 20 years old. Due to their diversity in age and gender, the presence of several participants generates a positive impact.

7.2 Reliability of the Questionnaire Using Cronbach's Alpha

To verify the reliability of the data, a reliability study using Cronbach's Alpha was performed. The most often employed indicator of internal consistency, in the opinion of many experts, is Cronbach's alpha (Franzen, 2013). Estimates of reliability are established using the consistency of the item responses from a single assessment. The reliability of a psychometric test is also estimated using Cronbach's (alpha) in statistics (Coolican, 2014). Cronbach's alpha has a commonly accepted lower bound of 0.70 (Hair, et al.,1998). The Cronbach alpha value of raw data for students' perception was 0.791. The coefficient of Cronbach alpha for the student's perception on AI – Assisted English language learning is 0.791. The Cronbach alpha value of raw data students' problems was 0.754. The coefficient of Cronbach alpha for the student's problem on AI – Assisted English language learning is 0.754. Both Cronbach alpha coefficient values of the student's perception and the problem satisfy the internal consistency of the data. The tables that demonstrate the reliability of students' perceptions and problems are provided below.

Table 3. Reliability of Student's perception

	No. of Items	Cronbach's alpha
Reliability	10	0.791

Table 3, shows that the reliability of student perception is $\alpha = 0.791$. Table 3, indicates that there is a positive relationship between each item score to the total perception variable. A value between 0.7 – 0.8 is good and acceptable but here from the above table, it indicates the value is near 0.8, it also proved that $\alpha = 0.791$, which means the items studied are reliable. Thus, it satisfies the internal consistency of the data. The reliability of the learners' difficulties questionnaire is shown in the table below.

Table 4. Reliability of Student's problem

	No. of Items	Cronbach's alpha
Reliability	10	0.754

Table 4, shows that the reliability of the student problem is $\alpha = 0.754$. According to Table 3, there is a correlation between each item score and the overall problem variable that is positive. A value between 0.7 – 0.8 is good and acceptable but here from the above table, it proved that $\alpha = 0.754$, this implies that the data investigated are reliable. Thus, it satisfies the internal consistency of the data.

7.3 Results of Learners' Perception and Problems in AI-Assisted English Language Learning

The current study presented several intriguing outcomes, categorises the research findings, and identifies issues with the prior studies. The findings of the questionnaire survey on students' perceptions of AI-Assisted English Language Learning are shown in Table 5 below.

Table 5. ESL Learners' Perceptions toward AI-Assisted English Language Learning

Rank No.	Item No.	Items	$\bar{x}$	S. D	Level
1	3	The benefit of utilizing AI-powered applications for English language learning is that it saves time.	4.22	0.758	H
2	6	Applications driven by artificial intelligence provide students the opportunity to learn English anywhere, at any time.	4.22	0.742	H
3	1	AI-powered applications allow me to access reliable English language learning tasks	4.15	0.615	H
4	10	Using AI-based apps facilitates interactive English language learning activities.	4.14	0.737	H
5	9	Apps with AI technologies will improve English language learning more engaging.	4.02	0.741	H
6	5	Few AI applications are cost-effective for English language learning.	4.01	0.766	H
7	7	There are a few AI applications available on smartphones that are beneficial for learning English	3.98	0.741	H
8	2	AI-based applications are user-friendly and easy to use.	3.98	0.632	H
9	8	AI Application via good internet connectivity provides an instant response to us at anywhere and anytime.	3.95	0.723	H
10	4	Various English language skills can be learned using AI Applications	3.91	0.656	H
		Total	**4.058**	**0.71**	**High**

Considering the findings in table 5. The overall average mean of students' perceptions of AI-assisted English language instruction was favorable. It shows that the use of AI-Assisted Applications for English Language Learning is viewed quite well by learners. The data's mean score can serve as proof ($\bar{x}$= 4.058). Item No. 3 received the highest level and it holds rank No.1 \ "The benefit of utilizing AI-powered applications for English language learning is that it saves time". From Table 5, item No. 3 had the highest means ($\bar{x}$=4.22). Because of the time constraints associated with English language instruction, learners had a favorable opinion of AI-powered programs. From the above mean score, it is evident that using AI-powered applications for the English language could save time. Item No. 3 and item No. 6 share the same mean value ($\bar{x}$=4.22). But item No.6 holds the second rank about standard deviation (S.D. = 0.742) \ "Applications driven by artificial intelligence provide students the opportunity to learn English anywhere, at any time". This indicates that students believe that AI-powered applications could provide them with meaningful content to learn the English language at their feasible places at any time.

The third rank was given to item No. 1 \ AI-powered applications allow me to access reliable English language learning tasks". The mean score of item No.1 is ($\bar{x}$=4.15) which proves that students can able to access a reliable English language learning task from AI-powered applications. Item No.1 gives us a significant result concerning the implementation of AI applications in the English language learning setting. The fourth rank was given to item No. 10 \ "Using AI-based apps facilitates interactive English language learning activities". The mean score of item No.10 ($\bar{x}$=4.14) is high. From the above table, the mean value of item No.10 states that the AI applications provide a good interactive module for language learning activities, especially the English language. The fifth rank was given to item No.9 \ "Apps with AI technologies will improve English language learning more engaging" and the mean score is ($\bar{x}$=4.02). From the mean score of item No.9, it is evident that students believe that AI-powered applications may provide engaging content to improve their English language learning. From table 5, item No.5\ "Few AI applications are cost-effective for English language learning" holds the sixth position. The mean score of item No.5 is ($\bar{x}$=4.01). Item No. 5 pinpoints that few AI applications are economical for English language learning. From the means score, it is evident that cost-effective AI-powered apps may help the student to achieve their English language skills.

Item No.7 \ "There are a few AI applications available on smartphones that are beneficial for learning English" holds the same 7th position. The mean score of item No.7 is ($\bar{x}$= 3.98) which proves that all the participants believe that AI applications in smartphones are beneficial for learning the English language. The eighth rank was given to item No. 2 \ "AI-based applications are user-friendly and easy to use". The mean score of item No.2 ($\bar{x}$= 3.98) is low. The mean score indicates the student's perception of AI-based applications for their usefulness is slightly low. Item No. 7 and item No. 2 share the same mean value but the standard deviation of item No. 2 (S.D = 0.632) both differ. Item No. 8 \ "AI Application via good internet connectivity provides an instant response to us anywhere and anytime" holds the ninth rank. The mean score of item No.8 ($\bar{x}$= 3.95) is considered low. From table 5, concerning the mean score of item No.8 students think that AI applications may not provide instant responses to them at anywhere and anytime with good internet connectivity. The findings of this survey show that the majority of students believe that using AI-powered applications will help them to become more fluent in the English language. However, item No. 4 has the lowest ranking \ "Various English language skills can be learned using AI Applications" ($\bar{x}$= 3.91). It demonstrates that students believe AI apps cannot help them master various English language learning abilities. In the modern digital world, students will increasingly choose to employ AI software for learning tasks, particularly while learning an additional language. These are all the perceptions of AI-assisted language learning among ESL Learners.

Table 6. ESL Learners' Problems toward AI-Assisted English Language Learning

Rank No.	Item No.	Items	$\bar{x}$	S. D	Level
1	4	Smartphones do not have good AI apps for language learning.	4.33	0.822	H
2	3	English language learning is not supported by the characteristics of AI apps.	4.02	0.866	H
3	9	AI-powered apps are quite expensive.	3.77	0.855	H
4	2	AI applications are being used by individuals for non-academic purposes.	3.72	0.884	H
5	10	There is currently a shortage of English language learning based on AI applications.	3.57	0.921	H
6	6	Data cost is very high when using any AI-powered applications.	3.56	0.866	H
7	7	Less familiarity among students with utilizing AI applications for English language instruction.	3.52	1.097	H
8	5	Battery becomes a problem during interaction with AI applications.	3.42	0.947	H
9	8	To receive an immediate answer, slow internet speed becomes a bigger issue.	3.05	0.973	H
10	1	Poor internet connectivity leads to less interaction with AI applications.	2.85	1.050	H
		Total	**3.580**	**0.92**	**High**

Based on the findings in Table 6, the ESL students concurred that the adoption of AI-assisted apps for English language learning faces several significant hurdles. The overall average mean of students' problems with Artificial Intelligence assisted English language learning was high. It denotes that learners have positive attitude towards solving problems within AI-powered applications. The data's mean score can serve as proof ($\bar{x}$=3.580). Item No. 4 received the highest level and it holds rank No.1 \ "Smartphones do not have good AI apps for language learning.". From Table 6, the highest means were item No. 4. It means ($\bar{x}$=4.33) indicate that the student believes reliable AI app based on language learning is not available on smartphones. It also suggests the necessity of having good AI apps on smartphones to promote English language learning.

Item No.3 holds the second rank "English language learning is not supported by the characteristics of AI apps". It means the score ($\bar{x}$=4.02) indicates that students believe that the features within AI-powered applications could not support English language learning. It also reminds us to establish good AI-featured apps, which support language learning. The third rank was given to item No.9 \ "AI-powered apps are quite

expensive". The mean score of item No.9 is ($\bar{x}$=3.77) which proves that AI apps are expensive. High-cost AI apps become a problem in the implementation of AI-assisted language learning. Item No.9 gives us a significant result in which cost-effective AI apps are mandatory for language learning settings.

The fourth rank was given to item No.2 \ "AI applications are being used by individuals for non-academic purposes.". The mean score of item No.2 (x bar = 3.72) s high. From the above table, the mean value of item No.2 states that student use AI apps for personal purposes rather than academics. The fifth rank was given to item No.10 \ "There is currently a shortage of English language learning based on AI applications." and the mean score is ($\bar{x}$=3.57). From the mean score of item No.10, it is evident that the availability of AI apps based on language learning is very low, especially for English language learning. From table 6, item No.6\ "Data cost is very high when using any AI-powered applications." holds the sixth position. The mean score of item No.6 is ($\bar{x}$= 3.56). Item No. 6 pinpoints that while using AI apps the cost of data is very high. It gives a significant result that reduction of data cost may provide a good result towards implementation of AI-assisted language learning.

Item No.7 \ "Less familiarity among students with utilizing AI applications for English language instruction." holds the same 7th position. The mean score of item No.7 is ($\bar{x}$= 3.52) which proves that students are not aware of AI apps, especially for English language learning. It also suggests that a proper awareness of how to use AI apps for language learning purposes is necessary. An instructional framework on how to utilize AI apps for language learning must be formed to get significant results on AI-assisted language learning. The eighth rank was given to item No.5\ "Battery becomes a problem during interaction with AI applications.". The mean score of item No.5 ($\bar{x}$= 3.42) is low. The mean score shows that the student's problem with the battery during the conversation with AI apps is slightly low. It indicates students don't face many difficulties with the battery during the interaction. Item No. 8 \ "To receive an immediate answer, slow internet speed becomes a bigger issue." holds the ninth rank. The mean score of item No.8 ($\bar{x}$= 3.05) is considered low. From table 5, concerning the mean score of item No.8 students think slow internet issues may not affect them to get instant feedback from AI applications.

The lowest rank is item No.1 \ "Poor internet connectivity leads to less interaction with AI applications." ($\bar{x}$= 3.85). The mean score indicates internet connectivity may not lessen their interaction with AI apps. Thus, these are all the problems faced by students towards the implementation of AI-assisted language learning, especially for English. Based on these findings, it cannot be determined that AI-powered applications are the primary learning medium for English because there are still issues with their utilization. This investigation could pave the way for the creation of effective AI-driven language-learning software

8. Conclusion

According to the findings of this current study (see Table 5), learners have a relatively positive opinion of the employment of AI-powered applications to support language learning both inside and outside of the classroom. It was demonstrated by the students' perception's mean score on average ($\bar{x}$ = 4.058). The time savings offered by using AI-powered applications for learning the English language received the students' highest favorable ratings ($\bar{x}$ = 4.22; S.D = 0.758). Similarly, the results of the student's problems (see Table 6) showed that both inside and outside of the classroom, students experienced significant issues using AI-powered applications that aided language acquisition. It was evident from the average means score ($\bar{x}$ = 3.580). They discovered a wide variety of barriers while utilizing AI tools for learning the English language. One of the greatest issues is that there aren't any effective AI language learning applications for smartphones ($\bar{x}$ = 4.33). To promote and facilitate English learning, AI-powered apps still need to be improved upon to incorporate appropriate NLP. The solution must be a technique to develop smart AI applications in language learning and teaching mediums to attain the objectives of ICALL and NLP-based pedagogies. Although this research has been performed and done following scientific processes, it still has certain flaws. For instance, the participant replies do not fully reflect the situation in reality and the number of questionnaires distributed and received was inadequate. Future studies will focus on the creation of language-learning software powered by artificial intelligence. Experimental studies in language learning based on AI applications are relevant to the current scenario. More experimental studies could resolve issues related to AI apps specifically, for language learning. Particularly as AI technology advances, it would be intriguing to explore how the limitations of AI applications may be resolved.

9. Recommendations

This research may be improved by adding additional participants from various Indian universities and colleges. In this investigation, questionnaires were employed to collect data, however semi-structured interviews with participants can also be conducted to obtain information to triangulate the data, it is suggested that future research incorporate qualitative data collection. It could demonstrate if the questionnaire replies provided by the students match up with their response variable. To accomplish this goal, quality data-gathering methods including journaling, keeping diaries, audio recordings and classroom observation might be appropriate. It would be advisable to broaden the scope of the actual survey and include more questions to examine the perspectives and issues of students belonging to different categories, from school to college, as well as concerning other stakeholders in the field of AI technology.

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