

The Use of IPAs or Intelligent Personal Assistants (Google Assistant, Siri, Alexa, Cortana, etc.) for Learning English Speaking Skills

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Abstract

This study examines Intelligent Personal Assistant (IPA) tools and their application for learning English speaking skills. The research method was reviewed through Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) by identifying, screening, and including related studies. It spans the studies from the years 2019 to 2024 that used IPAs as keywords. The findings show that Alexa, Google Assistant, and Siri are IPAs being used. They provide a platform for practicing, motivating, and encouraging others to speak English. However, the studies are limited in Japan and Taiwan since English is identified as a foreign language there. Moreover, teachers and students should be familiar with and ensure possible technical problems while using IPAs in the classroom. Then, it is important to conduct further research on this topic due to limited relevant resources.

Keywords: IPAs, Intelligent Personal Assistants, English Speaking Skills

Background

Intelligent Personal Assistants (IPAs) are an artificial intelligence that can be used in teaching and learning. It uses speech recognition to perform specific tasks and directions based on the given orders (Chen et al., 2020). It can search specific content by only uttering commands through language, which can be adjusted to the user's language preferences. The IPAs are Google Assistant,

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Siri, Alexa, Cortana, and others. Moreover, spoken language plays a significant role since the working principle of IPAs uses speech recognition as the leading resource to do tasks (Moussalli & Cardoso, 2020). It can be seen as a potential tool for learning and practicing speaking skills.

Speaking skills focus on spoken language and the use of language by uttering it through vocal apparatus (Wahyuni & Afrianti, 2021). According to Haris (1969, p. 81), cited in Rizqiningsih and Hadi (2019), speaking skills have five components: vocabulary, grammar, fluency, comprehension, and pronunciation. As a productive skill, it is essential, especially in using language in real situations (Ratnasari, 2020). Also, spoken English is crucial as the first, second, or even *lingua franca*. It is an international, business, and academic language (English, 2019). That is why this skill is vital to learn.

There are several problems in teaching and learning speaking skills, such as students' and teachers' low motivation, lack of vocabulary, fear of mistakes, lack of practice, and many more (Chand, 2021). One of the problems is the minimal opportunity for teachers and students to practice their speaking skills (Lightbown, 2000). This situation usually happens in ESL and EFL contexts. Consequently, they are less likely to get English exposure or practice their English (Wahyuni & Afrianti, 2021). This condition worsens because of the students' laziness, nervousness, and shyness (Chand, 2021). In fact, providing a platform for learning speaking skills is essential including using IPAs. Therefore, the author intends to conduct a comprehensive study to investigate the IPA tools and their use for learning English speaking skills.

Methodology

The methodology employed relies on a Systematic Literature Review related to the previous article's research on IPAs for learning English speaking skills. The data were limited to open-access articles from four databases: Science Direct, ERIC, Springer Link, and Sage Journal. From a total of 130.438 articles filtered through the "Intelligent Personal Assistants" keyword, we narrowed them to 592 based on publishing year 2019 to 2024, peer-reviewed articles, open-access articles, and particular topics (education, social, language, arts, and humanities) criteria. Then, the 592 articles followed identification, screening, and included phases of PRISMA by removing duplicate, unrelated, and other reasons for unmatched articles to the research topic (Page et al., 2021). Then, there were 7 articles included in this study. Furthermore, the process can be seen in the following Figure 1.

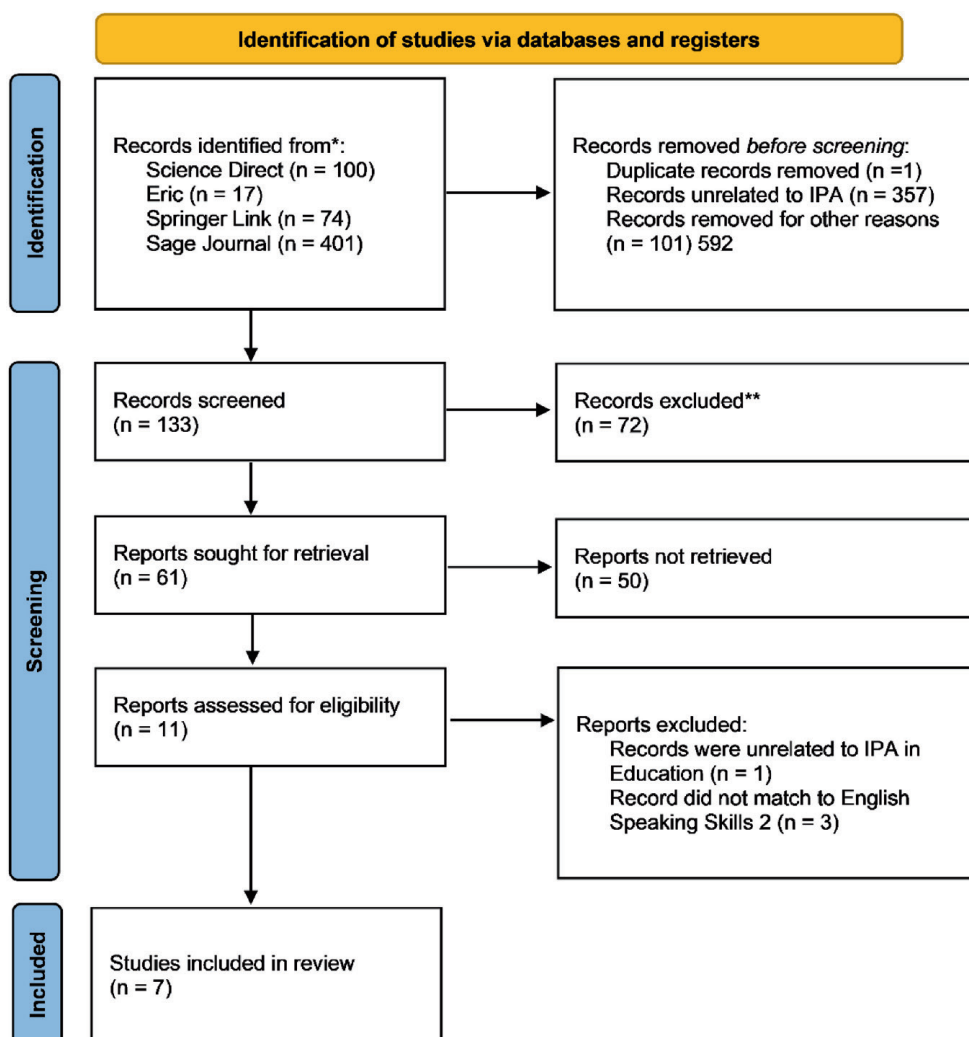


Figure 1. Flow chart of identification of studies via databases and registers.

Results and Discussion

This part discusses the results and discussion of the study. In the following Table 1 are the findings of previous studies about the role of IPAs in learning English speaking skills through PRISMA Systematical Review.

According to a systematic review, there are several IPA tools for learning English speaking skills, namely Alexa, Google Assistant, and Siri. This software maximizes the inputs from the users to do specific actions, such as answering questions, and searching for information, etc. (Chen et al., 2020). The IPAs

Table 1. Findings of characteristics of Intelligent Personal Assistants (IPAs) from previous studies

No	Author (s)	Country	Year	Aim	IPA Tool	Participants	Discussion
1	Tai & Chen	Taiwan	2020	To reveal the potential use of Google Assistant for improving WTC of EFL students and their perception towards IPAs	Google Assistant	112 eight-grade EFL students	Google Assistant improves students' engagement, motivation, confidence, and WTC
2	Hsu, Chen, & Todd	Taiwan	2021	To investigate the role of Amazon Alexa for developing students' listening and speaking abilities	Alexa	2 classes of L2 students	Alexa helps students to improve their speaking skills by interacting with it
3	Moussalli & Cardoso	N/A	2021	To investigate the use of IPAs for helping ESL students' pronunciation	Alexa	Eighteen ESL students	IPAs improve students' pronunciation
4	Dizon	Japan	2020	To examine the use of Alexa for improving students' listening and speaking abilities	Alexa	37 EFL university students	Alexa significantly improves students' speaking proficiency
5	Dizon	Japan	2021	To find out the benefits and challenges of IPAs for L2 learners	Alexa, Google Assistant, & Siri	N/A (theoretical resources)	IPAs enhance English speaking skills yet it is hard to be used
6	Dizon & Tang	Japan	2020	Intelligent Personal Assistants for Autonomous Second Language Learning: An Investigation of Alexa	Alexa	14 University Students	Alexa improves students' English accent, pronunciation, and speaking skills
7	Chen, Yang, & Lai	Taiwan	2020	To investigate the potential of Google Assistant for improving English learning	Google Assistant	29 EFL Google Assistant university students	Google Assistant enhances students' speaking and listening abilities

help to learn English speaking skills based on the analysis of speaking skill components:

1. Fluency: IPAs provide the conversation in the content where the AI speaks like a native of the target language. Therefore, it will boost the fluency of the learners itself.
2. Vocabulary: IPAs provide a platform to have a conversation directly, and we can read the question being questioned in the subtitle part which helps expand vocabulary.
3. Comprehension: IPAs might help the learners develop their speaking skills with contextual learning settings of the AI.
4. Pronunciation: the users will most likely understand how to produce certain words by imitating the AI's utterances (Dizon & Tang, 2020; Moussalli & Cardoso, 2021). According to Pennington (2019), the imitating and mimicking methods are essential to improve pronunciation skills which influence speaking skills simultaneously.
5. Grammar: the transcription feature is another helpful feature of IPAs. This might help the users identify the sentence's construction based on the grammar rules (Huang, 2019).

Furthermore, the other analysis is based on using IPAs in the classroom setting. Many researchers have revealed that IPAs are beneficial for educational purposes. There are several benefits to using it, such as the use of intelligent personal assistants provides a place for practicing, motivating, and encouraging to speak English (Chen et al., 2020; Dizon, 2020, 2023; Dizon & Tang, 2020; Moussalli & Cardoso, 2020; Tai & Chen, 2020), promoting learning autonomy, personalized, students centered, and collaborative learning (Moussalli & Cardoso, 2021; Hsu et al., 2021), and utilizing interactive and fun learning processes (Moussalli & Cardoso, 2020). However, it should be noted that using IPAs to learn English-speaking skills might bring challenges such as insufficient technology skills and technical problems (bad and pricey internet connection and devices). Therefore, it is important to ensure all essential aspects are met before implementation in the classroom.

Conclusion

Finally, IPAs help the educational actors in various activities in teaching and learning processes, including learning English speaking skills. The studies are limited in Japan and Taiwan since English is identified as a foreign language, which makes them have limited alternative ways of learning due to limited English speakers. Moreover, they should be familiar with and skillful in using

IPAs for better output. Then, due to limited discussion about IPAs in learning English speaking skills, the author suggests further research on this research topic.

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