



## Hey Google!: Can IPA improve L2 Learners' Willingness to Communicate?

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### ABSTRACT

This study investigates participants' perceptions of using Intelligent Personal Assistants (IPAs) with a focus on Google Assistant. While the majority of participants held a favorable view of IPAs, the implementation of Google Assistant alone did not significantly improve students' willingness to communicate, contrary to prior research findings. A common theme among participants was the challenge of comprehending Google Assistant's responses, highlighting the importance of designing accurate and user-friendly conversational agents. The study identified comprehension difficulties as stemming from anxiety experienced by individuals when using the English language. Notably, students with lower levels of English anxiety demonstrated better learning achievement. The study underscores the need for educators to address English anxiety among students and suggests further research to explore underlying factors contributing to comprehension difficulties and develop effective interventions.

## INTRODUCTION

Communication is an essential tool for humans to interact with each other and fulfill their needs as social beings. Communication is also needed to be able to understand each other and exchange ideas so that one with the other can understand each other's wants and needs. The primary form of communication is verbal communication. Verbal communication uses language as a contrivance that can bridge socializing.

Nowadays, people recommend not only having their mother tongue as the only language to communicate but also acquiring and being proficient in other languages. The common language to learn and use internationally is English. In learning a language, proficiency and fluency in speaking and writing is essential. In

writing English, EFL learners can do exercises alone and learn autodidact. However, it is another circumstance for speaking in English because it requires a partner to ameliorate the skill. In addition, not all EFL learners have the courage and willingness to speak in English, either because of trait factors or because they are constrained to ameliorate these speaking skills. Therefore, it is a challenge for EFL learners because, in the end, they will use verbal communication rather than non-verbal or writing when interacting, especially in another country.

The discoveries and inventions in technology today make the life of humans easier. In addition, discoveries and developments in artificial intelligence (A.I.) have significantly changed the ways and simplified human activities (Chen et al., 2020). One notable feature is the emergence of the Intelligent personal assistant, one example of the implementation of A.I. technology. An intelligent personal assistant is a personal assistant that can be personalized according to the needs and desires of its users. It has artificial intelligence to do the work commanded through the autonomous voice recognition of the owner and/or voice assigned to recognize by A.I. (Moussalli & Cardoso, 2020). One of the few Intelligent personal assistants popular nowadays is Google Assistant.

Google Assistant is to facilitate human information retrieval (Meganingrum et al., 2023). It is a personal assistant developed by Google that resembles intelligent personal assistants like Siri from Apple and Alexa from Amazon. Keeping user information is claimed to be safer, private, and secure. The purpose of. The user can command Google Assistant via text or voice, but in daily use, it is more likely to use voice commands by saying "Hey, Google" or "OK, Google" as a prefix command before giving commands. Google Assistant can do various things, such as searching for online information, real-time spoken translations, and opening applications. People can find Google Assistant on many devices, such as cell phones, cars, and speakers. Google Assistant is an intelligent personal assistant that can be communicated with and adjusted personally to its users.

Therefore, with the growth of civilization of the present day, humans are required to acquire fluency and proficiency in a second language, specifically English. However, the obstacle that EFL learners often experience is their need to improve their speaking skills. With the invention of A.I. and the popularity of intelligent personal assistants, Google Assistant, can be a solution for EFL learners to practice and ameliorate their speaking skills. This research examines the use of Google Assistant as an intelligent personal assistant in providing the learning and practice of speaking for EFL learners to speak English fluently.

The advancement of technology has greatly impacted education, providing a breath of fresh air. Various technological tools can be utilized to assist educators and learners in the teaching and learning process. One such technology is Intelligent Personal Assistants (IPA) like Amazon Alexa, Google Assistant, Microsoft Cortana, and Apple Siri. Integrating Intelligent Personal Assistants into traditional face-to-face instruction can be advantageous because these devices have the potential to enhance the quantity and quality of the information provided (Moussalli & Cardoso, 2020). What sets IPA apart from other technologies is its ability to enable learners to communicate outside the classroom without feeling pressured. Additionally, IPA creates a meaningful and enjoyable learning environment for students at any time and place, fostering an increased willingness to communicate in English (Gregersen & MacIntyre, 2014; Moussalli & Cardoso, 2016).

This research focuses on Intelligent Personal Assistant (IPA), which refers to popular voice-activated services connected to smart speakers like Amazon Echo, Google Home, and Apple's HomePod. These IPAs offer users a wide range of tasks and services (Moussalli & Cardoso, 2020). IPAs equipped with automatic speech recognition (ASR) technology create an engaging environment for language learners. According to Kessler (2018), ASR in IPAs provides L2 learners with opportunities to practice speaking, engage in various interactions, and enhance their communicative skills.

Numerous previous studies have examined the implementation of Intelligent Personal Assistants to practice speaking skills and improve learners' willingness to communicate. Tzu-Yu Tai and Howard Hao-Jan Chen (2020) investigated the impact of Google Assistant on the willingness to communicate in English and the perception of IPA for English learning among adolescent EFL learners. The findings revealed that IPA helped EFL learners enhance their willingness to communicate in English, boost their communicative confidence, and reduce speaking anxiety. Detailed analysis of participant interviews demonstrated that IPA-based interaction facilitated more L2 interaction and provided a less intimidating environment, resulting in higher levels of engagement, motivation, and confidence. This, in turn, increased opportunities for students to communicate in the L2 language.

Dizon (2017) specifically examined Alexa's comprehension of L2 utterances in two scenarios: learner-generated commands and interactive storytelling. The results indicated that Alexa's understanding of L2 utterances was moderately accurate. Learners who spoke English as a foreign language encountered more difficulties communicating with Alexa through learner-generated commands than through interactive storytelling. The study also found that the absence of native language support hindered learner efficiency by preventing students from utilizing their native language(s) to expedite the learning process. Overall, the pedagogical use of Alexa provided students with increased opportunities for verbal interaction in the target L2 language and indirect feedback.

This study analyzes L2 learners' perceptions of using Google Assistant as an Intelligent Personal Assistant to enhance their willingness to communicate in English. Additionally, the study addresses a gap in the existing literature by incorporating pre-tests and post-tests to assess learners' speaking skills improvements after implementing Google Assistant in their learning process. Specifically, the researcher seeks to answer the overarching question: *Can IPA improve L2 Learners' Willingness to Communicate?*

## RESEARCH METHOD

In this study, researchers used a qualitative approach. Then, explain the data through descriptions. The participants of this study were 15 of six semester EFL students from the Department of English Language Education of Universitas Tidar. Data will be collected with a closed-ended questionnaire via Google Form. Furthermore, a pre-test and post-test will be carried out on the participants in collecting research data. The first questionnaire is a pre-test conducted to obtain data about Willingness to Communicate before using Google Assistant. Next, participants were instructed to interact using Google Assistant to interact in English. After that, a second questionnaire will be filled in to obtain data regarding the willingness to communicate after using Google Assistant. Participants were then asked to provide a rating on a five-point Likert scale; (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree on each question according to the conditions of the participants.

## FINDING AND DISCUSSION

### *Findings*

There are two parts of the questionnaires in this study. The first set of questionnaires measured participants' perception of Willingness to Communicate activities that happened in a class. The second part of the questionnaire rate participant anxiety level in speaking English.

Table 1. Participants' Perception of Willingness to Communicate in English during a Class (pre-test)

No	Statements	Very unwilling	Unwilling	Willing	Very willing
1.	Talk to your classmates about a class assignment in English	12,5%	12,5%	43,8%	31,3%
2.	Communicate ideas, feelings, and opinions in English	0%	37,5%	37,5%	25,5%

3.	Ask for clarification when you are confused about an activity you must complete in English	6,3%	18,8%	50%	25%
4.	Listen to what your classmates say in English	0%	25%	43,8%	31,3%

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The first statement addresses the participants' willingness to communicate with their classmates in English. The findings indicate that the participants are indeed willing to engage in conversations with their peers. This is evident from the distribution of responses. Two participants (12.5%) expressed a solid unwillingness to talk to their classmates, and two participants (12.5%) chose the option of being unwilling. Conversely, seven participants (43.8%) indicated a willingness to communicate in English with their classmates, while five participants (31.3%) expressed a strong willingness.

In this study, the participants are willing to express their ideas, feelings, and opinions in English. Based on the collected data, six participants (37.5%) displayed an unwillingness to communicate in English, while six participants (37%) and four participants (25%) were willing to do so.

Regarding asking for clarifications when confused about an English activity, the data reveals that one participant (6.3%) expressed a strong unwillingness, and three participants (18.8%) indicated a general unwillingness. On the other hand, eight participants (50%) were willing to ask for clarification, and four were strongly willing. In conclusion, the participants are generally willing to seek clarification when faced with confusion during English activities.

The subsequent statement examines whether the participants read the activity description before starting to complete it in English. The data collection shows that the participants are willing to read the activity description. Specifically, ten participants (62.5%) expressed a willingness to do so, five participants (31%) strongly disagreed with the idea, and one participant (6.3%) disagreed.

Based on the data, it is evident that the participants are willing to listen to what their classmates say in English. The diagram illustrates that two participants (12.5%) were unwilling to listen, six participants (37.5%) were willing, and eight participants (50%) expressed a strong willingness to listen to their classmates' English communication.

Table 2. Participants perception towards their anxiety to communicate in English (pre-test)

No	Statements	Strongly disagree	Disagree	Agree	Strongly Agree
1.	I am not worried about making mistakes	25%	31,3%	31,3%	12,5%
2.	It is not difficult to communicate in English	12,5%	43,8%	25%	18,8%
3.	I did not feel nervous about using English while participating in class activities	12,5%	62,5%	12,5%	12,5%
4.	I can say what I want to say in English	0%	18,8%	68,8%	18,8%
5.	I think my classmates cannot understand me because of my poor English	6,3%	37,5%	37,5%	18,8%
6.	I feel comfortable sharing my ideas/feelings/opinions with my classmates	0%	6,3%	81,3%	12,5%
7.	I know the words required for each task completion	0%	18,8%	68,8%	12,5%
8.	In general, I find communicating in English classroom situations relaxing	0%	18,8%	68,8%	12,5%
9.	I think participating in class activities develop my fluency	0%	0%	56,3%	43,8%

Based on the data collected, the participants still express concerns about making mistakes when speaking English. This is evident from the results of the first statement in the second section. Approximately 31.3% of the participants disagree that they are not worried about making mistakes, and 25% strongly disagree. Furthermore, 31.3% and 12.5% of the participants agree and strongly agree that they are not worried about making mistakes.

The following statement assesses the difficulty of communicating in English among the participants. Approximately 12.5% and 43.8% of the total participants strongly disagree and disagree that it is easy to communicate in English. In contrast, based on the data collected, 25% and 18.8% of the participants agree and strongly agree that it is not difficult to communicate in English. In conclusion, the participants experience difficulty in communicating in English.

The third statement measures the participants' concerns when they do not understand what their classmates say in English. The researchers found a balanced result. Approximately 12.5% and 37.5% of the participants strongly disagree with the statement. Similarly, 12.5% and 37.5% of the participants strongly agree with the statement.

According to the data collection, the participants in this study feel nervous about using English during class activities. Based on the data, approximately 12.5% and 62.5% of the total participants strongly disagree and disagree that they do not feel nervous when speaking in English during class activities. Moreover, the same percentage applies to the participants who strongly agree with the statement.

The researchers found that the participants are able to express what they want to say in English. This can be observed from the data collection, where approximately 68.8% and 12.5% of the participants strongly agree and agree with the statement. However, approximately 18.8% of the total participants have a different opinion.

However, despite being able to communicate in English to express their thoughts, the participants believe their classmates need help understanding them due to their poor English. Based on the data, approximately 37.5% and 6.3% disagree and strongly disagree with this statement. Furthermore, approximately 37.5% and 18.8% of the participants agree and strongly agree that their classmates cannot understand them when communicating in English.

The next statement in this section measures whether the participants feel comfortable sharing their ideas, feelings, and opinions with their classmates.



Approximately 81.3% and 12.5% of the participants agree and strongly agree that they feel comfortable sharing these with their classmates. However, approximately 6.3% of the total participants disagree with the statement. Based on the data, the researchers conclude that the participants are comfortable sharing their ideas, feelings, and opinions with their classmates.

Regarding sharing and communicating ideas, feelings, and opinions in English, the participants are aware of the vocabulary required for each task. This can be seen in the collected data, where approximately 68.8% and 12.5% of the total participants agree and strongly agree that they know the necessary words when communicating in English. Additionally, approximately 18.8% of the total participants disagree with this statement.

According to the collected data, the participants find communicating in English in the classroom relaxing. Approximately 68.8% and 12.5% of the participants agree and strongly agree that communicating in English in the classroom is relaxing. Conversely, approximately 18.8% of the total participants disagree with this statement.

The last statement in the second section reveals that the participants believe their participation in class helps develop their fluency. From the collected data, approximately 56.3% of the participants agree that their participation enhances their fluency in speaking English, while 43.8% agree.

Table 3. Participant perception towards willingness to communicate in English (post-test)

No.	Statements	Very Unwilling	Unwilling	Willing	Very Willing
1.	Talk to Google Assistant about a communication activity	0%	31,3%	50%	18,8%
2.	Communicate ideas, feelings, and opinions	6,3%	18,8%	43,8%	31,3%

3.	Ask for clarification when you are confused about an activity you must complete	0%	12,5%	56,3%	31,3%
4.	Read the activity description before you start completing	0%	12,5%	43,8%	43,8%
5.	Listen to what Google Assistant says in English	0%	6,3%	56,3%	37,5%

The first statement points out participants' willingness to communicate in English with Google Assistant. The results showed that 50% of the participants were willing to communicate with Google Assistant. 18.8% of participants felt very willing to communicate with Google Assistant. Unfortunately, 31.3% of participants stated they were unwilling to communicate with Google Assistant.

The second statement that relates to Google Assistant is the willingness to express ideas, feelings, and opinions. From the data collected, 43.8% of participants were willing to communicate. As high as 18.8% are very willing to express ideas, feelings, and opinions. On the other hand, 18.8% of participants stated they were unwilling to communicate with Google Assistant. In addition, 6.3% stated that they were unwilling to communicate.

Furthermore, the data shows that 56.3% are willing to ask for clarification when confused by the activities performed. 31.3% of participants stated they were willing to ask Google Assistant. In contrast, 12.5% of participants were not willing to ask.

Furthermore, the statement related to reading the description before doing the activity. From the data in Table 3, 43.8% were very willing to read the description. Another 43.8% revealed that participants were willing. However, 12.5% of participants were unwilling to ask Google Assistant.

Last but not least, most of the participants (56.3%) were willing to listen to what the Google Assistant said. In addition, 37.5% of the participants were very willing to listen to Google Assistant in English. In contrast, there were still 6.3% of participants unwilling to listen to what the Google Assistant said in English.

Table 4. Participants perception towards their anxiety to communicate in English (Post-test)

No.	Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
1.	I am not worried about making mistakes	12,5	43,8%	25%	18,8
2.	I find it difficult to communicate in English.	12,5	31,3	43,8	12,5
3.	I am worried that I will not understand what Google Assistant says in English.	18,8%	43,8%	25%	12,5%
4.	I can say what I want to say in English.	0%	6,3%	75%	18,8%
5.	I think Google Assistant cannot understand me because of my poor English.	12,5%	43,8%	37,5%	6,3%
6.	I feel comfortable sharing my ideas/feelings/opinions with Google Assistant.	6,3%	18,8%	56,3%	18,8%
7.	I know the words required for each activity completion	0%	12,5%	68,8%	18,8%
8.	In general, I find communicating in English in Google Assistant-mediated interactive situations relaxing.	0%	6,3%	75%	18,8%
9.	I think using Google Assistant developed my fluency	0%	12,5%	43,8%	43,8%

Based on Table 4 it shows that 18% of participants were not worried about making mistakes when speaking English, followed with 25% of participants who agreed with the statement. Unfortunately, 12.5% state that they are opposed to the statement. Also, 43.8% of the participants are still worried about making mistakes in communication.

The second statement deals with difficulty communicating in English. The data shows that 12.5% of participants strongly disagree with the statement. Furthermore, 31.3% disagree, which indicates that they experience difficulties communicating in English. Fortunately, 43.8% of participants had no difficulty communicating in

English, especially for the 12.5% of participants who strongly agreed with the statement.

The third statement is about a statement that reveals participants' anxiety toward Google Assistant. The data in Table 2.2 reveal that most participants worry they will not understand what Google Assistant says. Also, 18.8% of participants strongly agreed with the statement. Contrary to that, 25%, or 4 participants, agree with what Google Assistant says. Particularly for two (12.5%) participants who strongly agreed with the statement.

The following statement relates to the participant's ability to communicate in English. The data showed that 75% of participants could say what they wanted in English. Especially for 18.8% of participants who strongly agreed with the statement. Although 6.3% of participants cannot say what they want when communicating.

The following statement, "I think Google Assistant cannot understand me because of my poor English," on the table shows the participants' experience. Based on the data, 43.8% disagree with the statement. Specifically for 12.5% of participants who strongly oppose the statement. Unlike 37.5% of others who agree with the statement. In addition, 6.3% of the participants strongly agreed that Google Assistant could not understand what they said due to their poor English.

This sixth statement indicates how comfortable the participants are while sharing their ideas, feelings, and opinions with Google Assistant. The table shows that more than half (56.3%) of the participants agree with the statement. Certainly, 18.8% of participants strongly agree that they feel comfortable sharing with Google Assistant, except for 18.8% of participants disagreeing with the statement. Likewise, 6.3%, or one participant, strongly disagrees with feeling comfortable sharing ideas, feelings, and opinions with Google Assistant.

Furthermore, the seventh statement deals with their vocabulary for each activity. Most participants, specifically 68.8%, already know what words they should use

for each activity. Fortunately, 18.8% seemed to have no difficulty choosing the appropriate word, even though 12.5% of the participants did not know the suitable word for each activity.

The following statement is about the participant's experience with communicating in English with the Google Assistant-mediated interactive situation is relaxing. From Table 4, the data reveal that three-quarters, or 75%, of the participants, agree that the Google Assistant-mediated interactive is relaxing. The activities are enjoyable, especially for 18.8% of participants who strongly agreed with the statement. However, 6.3%, or one participant, opposed the statement.

Lastly, data from Table 4 shows the participant's experience dealing with their English fluency after interacting with Google Assistant. 43.8% of the participants agreed that Google Assistant helped them develop fluency. Relatively 43.8% strongly agree with the statement, which means Google Assistant contributes significantly to their fluency. Unfortunately, 12.5%, or two participants, disagreed that Google Assistant affected their skills.

### ***Discussion***

The present study aimed to investigate participants' perceptions of using IPAs. The results indicated that the majority of the participants held a favorable view of IPAs. Interestingly, the implementation of Google Assistant is not enough to improve students' willingness to communicate. The results mentioned above contrast with research conducted by Moussalli and Carsodo (2016), which indicated that participants expressed a sense of ease while conversing with IPAs and perceived them as a beneficial resource for enhancing their pronunciation and vocabulary.

The concern of comprehending the Google Assistant's responses was a common theme among most participants. This finding contrasts the assumption that users would be primarily concerned with the accuracy of the responses. The fear of misunderstanding the Assistant's output highlights the importance of designing accurate and easy-to-understand conversational agents for users. Further research

is needed to explore the factors contributing to users' comprehension difficulties and develop practical solutions to address this issue. The cause of this phenomenon was attributed to the anxiety experienced by individuals when using the English language. The study results revealed that students with lower levels of English anxiety exhibited better learning achievement than their counterparts with higher levels of English anxiety (Cheng & Chen, 2022). This finding suggests that English anxiety may have a negative impact on students' academic performance. Therefore, educators need to identify and address English anxiety among students to promote better learning outcomes. Further research is required in order to explore the underlying factors contributing to English anxiety and to develop effective interventions to reduce its adverse effects on students' academic success.

## **CONCLUSION**

In investigating the impact of Intelligent Personal Assistants (IPAs), specifically focusing on Google Assistant on L2 learners' willingness to communicate, the study revealed nuanced findings. While the majority of participants viewed IPAs favorably, the implementation of Google Assistant alone did not lead to a significant improvement in students' willingness to communicate.

This outcome diverged from prior research that suggested positive experiences with IPAs, emphasizing their utility in pronunciation and vocabulary enhancement. Notably, participants expressed concerns about comprehending Google Assistant's responses, revealing a common theme of apprehension about understanding the output.

The study highlighted the importance of addressing users' comprehension difficulties and emphasized the need for accurate and easily understandable conversational agents. Contrary to expectations, the primary concern was not solely the accuracy of responses but rather the fear of misunderstanding the Assistant's output.

Moreover, the research identified English language anxiety as a significant factor contributing to comprehension difficulties. The study showed that students with lower levels of English anxiety demonstrated better learning outcomes, underscoring the negative impact of English anxiety on academic performance.

In conclusion, while IPAs, including Google Assistant, may have potential benefits, such as favorable perceptions from users, they alone may not be sufficient to enhance L2 learners' willingness to communicate. The study recommends further exploration of factors influencing comprehension difficulties and the development of interventions to mitigate the adverse effects of English anxiety. These insights contribute to the ongoing discourse on leveraging technology in language learning and call for a nuanced approach in addressing learners' communicative challenges.

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