

# Improving English Vocabulary through Artificial Intelligence (AI) Chatbot Application

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## Improving English Vocabulary through Artificial Intelligence (AI) Chatbot Application

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### ABSTRACT

This study aim to use of Artificial Intelligence (AI) chatbots in improving the vocabulary of students at SD-IT Iman Syafei Pekanbaru. The purpose of this training is to cultivate and develop the interest and creativity of trainees in English by enriching English vocabulary, it is a chatbot application that can be used to send digital messages in English. The purpose of this activity is to increase the vocabulary of participants to be able to communicate well in English; provide procedural explanations of the use of AI chatbot applications regarding the use of technology in English language learning and how to practice it through android applications; facilitate participants with independent learning. Furthermore, this activity also hones participants' skills to create and convey ideas in communicating in writing in English. This activity is carried out through lecture and demonstration methods. Then proceed with handsonpractice. Demonstration methods and examples involve more about deciphering and demonstrating something through examples or in other words learning by doing or learning by practice which emphasizes learning by doing, so it's not just theory. So, trainees are given the opportunity to practice using AI chatbots Application. In addition, students make a short writing for English conversation with the help of the service team and students involved in this activity. The results of this training show that all participants are enthusiastic, happy, and motivated because this application is still unfamiliar to participants. Participants also know the use of this application, so they can indirectly learn independently whenever and wherever participants.

**Keywords:** Writing Essay, Critical Thinking, Module

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### INTRODUCTION

English is one of the most widely spoken international languages in various countries. Today English has become the language of instruction for communicating with other countries in the world (Sofyan, 2021). Now English is one of the lessons in school contained in the curriculum. High schools to colleges have taught English. How important English is, many non-formal institutions facilitate English language learning. Even in a village in Pare, Kediri gave the name of the village Kampung England, as a center for learning English. The purpose of learning English as a second language or foreign language is to make learners able to communicate effectively (Mohammed, 2018). Because basically language is a tool to be able to convey ideas, the idea of being able to communicate well (Y. N. Sari & Margana, 2019). The application of English learning is expected to make students

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competent in communicating with others. In this regard, language teaching as a foreign language context should be done interactively, where learning involves the occurrence of two-way or more interactions which include teacher interaction with students, students with students and with the community, natural environment, and other sources or media.

One of the most important things that students must have in mastering English is vocabulary. Learning vocabulary for English seems easy but some students struggle to memorize. Students assume that learning English makes them bored studying in class. In addition, the role of teachers in teaching is also important so that students are interested in learning English. Teachers can tell students to repeat words that are difficult to pronounce making it easier for students to speak English. Because without mastering vocabulary, students will find it difficult to understand the meaning when reading, Listen and express his ideas in communicating. Conversely, if the student has a lot of vocabulary he will find it easy to communicate and understand the opponent of the speaker in English. In addition, in fact, as seen at the target location, when the service team conducts pre-observation in the form of questions and answers, students still have a high enough concern and fear to speak or speak English in front of a crowd. Or in other words, they don't have the courage and self-esteem to speak in front of a crowd. There are several things that cause this, one of which is the lack of vocabulary that they know and master, so they are limited in conveying their ideas and thoughts. The low interest of students in speaking English is also a problem found in the target audience. They shouldn't just be encouraged to learn, but also encouraged to learn to acquire knowledge, as well as promote learning to act. For junior high school students where they are still transitioning from an elementary school environment, teachers must be able to provide varied English teaching and experiences (T. Sari & Nayır, 2020).

In addition, Slamet et al. (2020) argues that in 21st century learning, one of the important components that teachers must have is the ability to use and create ICT (Information Communication Technology) based learning resources for learning purposes (Vijayalakshmi, 2021). ICT facilities can act as a medium for educators and students in finding meaning in the English language. In this case, a chatbot is one of the options that can be applied to junior high school learners. Chatbot is an artificial program based on Artificial Intelligence (AI) or artificial intelligence, which can simulate conversations or chats with other users like humans through messaging applications, websites, mobile applications, or by phone. By communicating via text with artificial intelligence robots is expected to make students interested in learning English and certainly can increase the vocabulary they have.

Chatbot is one of the artificial intelligence-based artificial programs that can simulate English conversations to get authentic and human-like practices. Brennan (2006) defines an AI chatbot as an artificial construct designed to communicate with humans using natural language as input and output (Alsadoon, 2021). The software is designed to be very human-like by operating through pattern matching techniques. Hubbard (2009) emphasizes that AI chatbots are a promising medium for future research on second language acquisition and computer-aided language learning. Further, Coniam (2008) reports that the ability of chatbots to respond in English has an interesting potential language problem. Over the past few decades, various AI chatbots have grown in quality and quantity (Jung, 2019). Related to this, the service team wants to apply the AI chatbot to students at SD-IT Imam Syafei Pekanbaru as one of the Tridarma of Higher Education activities. With this community service, it is expected to increase students' English vocabulary through AI chatbots and hopefully can increase the English vocabulary of learners that will influence them in speaking English with others. In addition, the low interest of students in speaking English will also be overcome by the integration of technology into the classroom carried out by presenting or creating ICT-based media and learning resources, in this case AI chatbots will make students' interest and enthusiasm in English increase because in service activities students can tell stories, Exchange ideas and even pour out each other's hearts to the artificial intelligence. They can practice English without being limited by time and place. This will encourage students to be able to learn independently anytime and anywhere. This will

certainly be in line with the 2013 Curriculum learning approach, namely student-centered learning

## METHOD

Community service activities entitled "Increasing English Vocabulary through Artificial Intelligence (AI) Chatbot Applications" have been carried out at SD-IT Imam syafei Pekanbaru. This activity was carried out for 2 (two) times, namely on July 21, 2022 and on Maret 10, 2023. The number of participants who participated in this training was 20 people consisting of representatives of class 4, class 5 and class 6. In community service activities, the term method is defined as a pattern or system of actions to be carried out, or the sequence or stages needed in carrying out community service activities (Batubara et al., 2022). In this regard, this service activity takes place in several stages. The first stage is planning. This planning stage begins with the formation of a service team consisting of lecturers of the English Language Education Study Program. Furthermore, the service team that has been formed conducts a situation analysis by determining the target audience and problem areas to be analyzed. After determining the target audience and the problem areas to be analyzed, the service team makes observations to the target audience.

In this case, the service team tries to find, see, and study the overall problem faced by the target audience. In addition, coordination is also carried out related to licensing issues or the willingness of target audiences. Furthermore, the stage carried out is preparation where the service team prepares all materials, materials, or tools that will be used or needed at the time of implementation. After the preparation of everything related to service activities is completed, the next stage is implementation. In the implementation stage, the service team carries out activities using various methods. Among them, lecture methods, questions and answers, discussions, and assignments. The lecture method is used when trainers provide information and knowledge about Chatbot (AI) applications to trainees. The question and answer method was used to clarify the material that was still a problem for the training participants (students of SD-IT Imam Syafe'i Pekanbaru). This training uses the discussion method and this plays an important role in this activity so that participants submit their opinions based on argumentation. Some of these methods are very helpful for the service team to deepen the material to be given to students.

## FINDINGS AND DISCUSSION

In this section, devotees elaborate and discuss the results of this training. This devotion in the form of training lasts for 2 (two) days, two (2) meetings. The participants who participated in this training amounted to 20 people (student representatives) as the target target. The first meeting was held on Sunday, February 6, 2023. The training participants who attended on the first day amounted to 30 people (students). At the second meeting held on Friday 17, February 20 2023, there were 20 trainees present. Service activities in the form of training, the service team numbered 5 teaching staff (lecturers) and assisted by two helpers, namely 2 (two) students who were again preparing their final project proposals.

On the first day of this training, before the training began, the trainees were given direction in the form of motivation about the importance of English being learned and mastered. The directive is approximately 15 minutes. Therefore, the direction given is associated with alternative media that can be used to quickly understand, know, and develop one's English, especially the development of English vocabulary which is very limited to learners. In the briefing, the devotees introduced one application that is very easy to use to develop students' English, especially English vocabulary, namely the Artificial Intelligence Chatbot Application and the requirements must have a mobile phone (android). When briefing the training participants, it seems that all participants

have mobile phones (android) so that it will facilitate the training later. In the service briefing, explained a little understanding and knowledge of trainees about what a Chatbot is. Chatbot is an artificial program based on Artificial Intelligence (AI) or artificial intelligence, which can simulate conversations or chats with other users like humans through messaging apps, websites, mobile apps, or over the phone. By communicating via text with artificial intelligence robots is expected to make students happy and interested in learning English because anytime and anywhere can be used and of course in the end can increase your vocabulary.

The delivery of this training material is in the form of lectures, discussions and at the same time Questions and answers. This delivery model is very effective because this Chatbot application is not too complicated to use. Therefore, the speaker equipped on how to implement and operate the Artificial Intelligence Chatbot application (AI) to the training participants, namely students of SD-IT Imam Syafe'i Pekanbaru. While delivering material on instructions for use, other devotees came to one by one the trainees and instructed the participants how to first open this application on the mobile phone (Android) of each trainee. At the time of the provision of material that takes place. The results of the testimony, all participants felt enthusiastic and happy in this application training, because it really helped their English language development and indirectly English vocabulary increased with the conversation between participants and this Artificial Robot (Chatbot application) because this Robot responds to all conversations (chatting) with correct English, even though the questions (chatting) from participants are grammatically incorrect, not in accordance with grammar (English grammar) but the Artificial Robot understands it so that it responds in good and correct English.

The results of research conducted by Moechammad Sarosa and friends (2020) showed that 97.5% stated that Chatbot had helped students learn English, 95% said that the material presented was quite interesting and 85% of Chatbot applications did not burden the performance of students' mobile phones. Therefore, in the learning of the 21st century, one of the important components that teachers must have is the ability to use and create ITC (Information Communication technology) based learning resources for learning purposes for students because this facility acts as a medium for educators (teachers) and students in finding meaning in English and encourages student-centered learning. The results of this training also found that the trainees were excited and increased their learning because this Chatbot application was used as a means of practicing English whenever and wherever students were. This facility can be used as a place to tell stories, exchange ideas and even vent to this Artificial Robot and indirectly, of course, can increase the English vocabulary of students. This chatbot application is a virtual robot that can understand and process user requests, and provide relevant answers appropriately. Even the 'bot' itself can mimic human conversations in the form of text and voice applied to websites and applications such as Facebook, WhatsApp, Twitter, and others. The results of search conducted by Aliv Faizal Muhammad and Farah Adila (2021) revealed that chatbots and testing the level of response accuracy increased if the variety of vocabulary data sets increased. In addition, it is said that this media can be used by language learners to practice English conversation (Muhammad & Adila, 2021). Furthermore, in the study it was also described that students also prefer to do 'silent practice' in reading conversational texts while learning English skills and some just memorize them. Since today's learners are typically digital natives, the nature of student learning has shifted from traditional to digital means through the integration of technology in their silver literacy. This new perspective supports the use of technology in language learning, especially English.

## CONCLUSIONS

Training on the use of the Chatboat Artificial Intelligence application to participants can increase the passion and motivation of participants in learning English because so far what has become an obstacle for participants is the limited vocabulary they have. With the presence of this AI Chatbot application, participants are more excited and confident in developing their English independently, especially vocabulary. This training also makes participants more willing to learn English because this application can be used anywhere and anytime. Therefore, the service team advises stakeholders that this kind of training should be presented regularly whenever there is fun learning media for students so as to make students not miss information about ICT-based learning media and fun for students

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