

The Use Of Ai Replika In Speaking Skills In Engineering College: Benefits And Challenges

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Abstract:

This article observes the advantages and challenges associated with implementing AI Replika in speaking classes. Students can practice speaking English directly or in real time using artificial intelligence with the aid of AI Replika. Students have the option of using speaking robots or catboats as features. The methodology employed in this study was descriptive qualitative, the methodology of a case study is utilized. As techniques for gathering data, participant observation and interviews were used. Data validity techniques employ three fundamental types of triangulations: theoretical, methodological, and source data triangulation. The outcomes demonstrate that, in the event that a native speaker is not available for speaking practice, AI replicas can be employed as a substitute. AI is still unable to fully replace teachers in the classroom. Students believe that even though AI Replika helps them practice speaking in front of the class, teachers are still necessary to explain the context of the speaking material. Additionally, students believe that the AI Replika conveys concepts more literally rather than allowing them to comprehend the cultural significance of the discussion. In the end, well-balanced AI technology can enhance language acquisition; however, real

native speaker presence is still required for a more humanist approach.

Introduction:

Artificial intelligence (AI) is a popular technical field in education right now. Artificial Intelligence (AI) has the potential to be a useful tool in education, facilitating students' practice (Jaiswal & Arun, 2021). Furthermore, AI was developed to give everyone access to the field of education because it permits unrestricted access. The use of AI applications as tools has helped instructors and peer learning experts worldwide (Edwards & Cheok, 2018). AI can also be used to personalize learning in a number of ways and enable complex collaborative learning. We were unaware that artificial intelligence was infiltrating daily life through apps on smartphones, for example (Sánchez-Prieto, et al., 2020). In the field of English education, artificial intelligence plays a significant role in the autonomous acquisition of language skills, including online speaking, writing, and listening practice. When learning a foreign language, AI typically acts as a friend or partner (Ji, Han, & Ko, 2023). Chatbots are one such example; language learners use them a lot these days. Given the current state of affairs, studying a language's linguistic characteristics is no longer the only approach to language study. Understanding and articulating both implicit and explicit meanings in communication are the main components of language acquisition. This message is conveyed both verbally and in writing during a communication exercise (Sifakis, 2019). Therefore, in addition to having a large vocabulary,

being proficient in English as an international language means being able to use it as a tool for international communication (Watterson, 2008). Students are required to complete these courses in phases due to their set structure. First, new students take intensive speaking classes. They then move on to transactional, casual, factual, and critical speech classes. The speaking classes will improve the students' abilities, which are crucial for anyone aspiring to teach. As most students are in monocultural classes or have similar cultural and linguistic backgrounds to their friends, it is thought that students also need some native exposure to build an English academic atmosphere, even though the status quo shows that lectures and the lecturers can currently serve as a means for students to learn how to speak. In other words, the classroom setting in most Indian technical education does not yet provide a setting for organic cross-cultural communication. One of the difficulties in learning spoken English in numerous literary works is this (Kapur, 2018).]

Keywords: Artificial Intelligence, Communication skills, Technology, Replica.

Significance of the study:

The AI community is currently pushing a number of applications for learning spoken English. Among them is the Replika application. Millions of people have used Replika, the most popular and highly rated social chatbot in the Apple and Google Play stores, since its launch in 2018. Replika refers to their app as a "friend who is always listening" or "an AI version of you," and it is widely utilized as a mentor for independent English language acquisition (Weber-Guskar, 2022). Replika differs from other companion chatbots in that it bases its responses on Generative Pretrained Transformer 3 (GPT3) rather than responding to user vocal cues. A separate dataset of user chats was used to create the network language model known as GPT3. As a result, the software can select a language response from the datasets containing more than a million responses. Replika has a wider word recognition range and is therefore more versatile (Pentina, Hancock, & Xie, 2023). To put it briefly, Replika is a sophisticated artificial intelligence tool designed to help students practice writing and speaking on their own. Given that they are mature, flexible, independent, and well-organized by nature, it is thought to be appropriate for higher education students (Knox, 1992). Furthermore, the

quick development of AI technology has significant effects on teaching and learning. To incorporate AI into teaching and learning, significant investments have been made (Cope, 2021). This investment combines educational betting with a focus on profit. According to Luckin and Cukurova (2019), AI developers are not well-versed in the science they are studying and do not possess the pedagogical expertise necessary to effectively integrate AI into the classroom. Furthermore, according to Cukurova, Kent, and Luckin (2023), AI developers frequently fall short of the expectations of their users, specifically teachers. Finding out when and how AI fits into the teaching and learning process is a necessary step in making AI pedagogically relevant for teachers. Teachers must continue to be involved in guiding students' learning even though artificial intelligence (AI) is a major factor in autonomous learning outside of the classroom (Barnes, et al., 2005). Replika has been widely used in English language learning, both formally in classroom settings and informally outside of them (Sánchez-Prieto, 2020; Kim, 2019; Lin & Mubarak, 2021). Nonetheless, earlier studies continued to concentrate on Replika's chatbot functionality. The application of the chatbot feature to writing and speaking comprehension is then explored. Regarding this, Replika also features a real-time talking robot feature that enables students to practice speaking with language choices and pronunciation that are thought to be at a native-like level. In light of this, this study investigates the characteristics of the AI Replika, a talking robot that gives lectures, in response to the pressing need for students or learners to practice spoken language with native speakers. The AI Replika features that are being discussed here are the written conversation chatbot and the AI speaking robot. These tools enable users to have real-time spoken conversation partners with a variety of themes and natural-sounding speech capabilities that are comparable to those of native speakers. The lack of exposure to English native speakers for students during their education can be addressed with AI Replika. Speaking English now involves using the language orally in the context of native speakers rather than just memorizing rules and practicing through role-playing.

The following research questions form the basis of this study:

- (1) How is artificial intelligence (AI) Replika implemented to take the place of native speakers in lecture delivery?

(2) What are the benefits of using Replika AI to give lectures instead of having native speakers deliver them?

(3) What obstacles must be overcome before Replika AI can fully take over the role of native speakers in lectures?

The results of using AI Replika in speaking lectures will be investigated in this study. This study will identify the use of artificial intelligence (AI) Replika to replace the role of native speakers in speaking lectures using descriptive qualitative methods. It will also explain the benefits and difficulties of this implementation in the field. This is accomplished by examining best practices and contrasting the findings with earlier theories regarding the ability to speak English and theories regarding language communication as well as the significance of culture.

Methods:

This research uses a case study design. A case study is a type of research where the objective is to generate in-depth conclusions about a particular case by relating it to an established theory and demonstrating that the conclusions cannot be applied to other cases (Bryman, 2016). Case study research ignores other phenomena in favor of concentrating on a single, carefully chosen phenomenon that needs to be fully understood. Stated differently, a case study outlines specific traits or issues (Denzin & Lincoln, 2011). A school or educational leader, a group of students, a program, a procedure, the application of a policy, or an idea can all be considered phenomena that are discussed. In addition, this research is implementation research, which is conducted to apply, test and assess a theory's or method's suitability for use in resolving real-world issues in order to make it useful for people in both individual and group settings (Desimone, et al., 2004). Enhancing the caliber of instructional materials, curriculum execution, or technical tactics and learning models to boost student interest and motivation in learning are all areas of focus for implementation research in education. The application of AI Replika in lectures given in English is being examined in connection with this research. The research subjects for this study are English Education Study Program students enrolled in the Casual Conversation course for the Even 2022-2023 academic year at SWEC. It was hoped that the research's participants, 40 students, who had also attended speaking lectures with researchers the previous semester,

would demonstrate an improvement in their speaking abilities. Stated differently, the duration of data collection was either one semester was held in Casual Conversation. The application of AI Replika is the subject of the study. The study's goals, however, are connected to the benefits and difficulties of using AI Replika. This specifically looks at the learning materials that students have been studying for speaking classes, with a focus on the AI Replika method of teaching students to speak English. Participant observation and interviewing techniques were employed as data collection methods in this study. The technique of participant observation was selected due to the researcher's involvement as a research subject. The reason for the teacher's involvement is that the researchers taught the Transactional Conversation course in the class under investigation. Participant observation, according to Reilly (2010), enables researchers to watch the subject under study while also taking part as subjects. This is done in order to comprehend the research object under study on a deeper level. Interviews were done to complete the data after participant observation methods were used to collect it. Interviews took place outside of scheduled class times. The students that were interviewed were those enrolled in the Casual Conversation course. Denzin and Lincoln (2011) describe the data triangulation technique as a heuristic tool for researchers, and this is the data validity technique used in this study. This data triangulation comprises methodological triangulation, which employs multiple approaches to examine a single problem, theoretical triangulation, which employs multiple viewpoints to interpret a single set of data, and source data triangulation, which employs quantities of data in research. The data analysis method utilized in this study is an extension of Nasution's (1988) method of analyzing natural learning phenomena. Similarly, Huberman and Miles' writings on learning in the scientific framework of educational psychology contain this kind of data analysis (Huberman & Miles, 2002). This type of data analysis, referred to as interactive model analysis, entails data reduction, data visualization, and conclusion/verification drawing. The majority of the data examined relates to Replika AI's use in lectures given in English.

Results and Discussions:

The three primary questions that this study seeks to address are:

1. How is the AI Replika implementation going?
2. What advantages does using the AI Replika in Speaking Classes offer?

3. What difficulties lie in putting AI Replika into practice in speaking classes?

Although there are two perspectives from which those questions can be answered—those of the lecturers and the students—this study focuses more on the perspectives of the students.

Artificial intelligence application

The purpose of AI Replika in this study is primarily to assist students in honing their speaking skills outside of the classroom. It is not intended to replace lecturers in the teaching role. But lecturers are the ones who decide what kind of speaking assignment the students are expected to complete the next week. The lecturers in the casual conversation class went over various conversation theories, the appropriate level of formality, communication techniques, and cultural connotations of spoken conversations. As background information, students were then given the chance to watch a few videos of informal conversations. Following the theory, each student had the chance to practice speaking in pairs by participating in role plays using either the lecturers' provided contexts or their own, which they created while referencing the lecturer-given topic. Following the completion of the exercises, students were introduced to AI Replika. The chatbot's features, which allow users to explore the robot's vocabulary using the previously selected topic, were first presented to the students. Following their exploration of the chatbot, students were presented with the speaking robot's features, which allow them to engage in direct conversations about any topic they choose. After giving students the chance to investigate AI, lecturers split the class into pairs and assigned each pair a specific topic to research the next week. This time, before they practice conversing with their peers, they will have to practice speaking with the AI for a week. For four weeks, students practiced speaking directly to a robot as part of their speaking exercises. Students were asked about the advantages and difficulties of using AI Replika in interviews after completing the activities and all 15 meetings, which included two exam days. They were specifically asked about their

exposure to native-like pronunciation, vocabulary, accents, and cultural discussions.

Students generally find it enjoyable and delightful to have a speaking partner who can accommodate their schedules and give them a sense of independence. Although the internet connection occasionally prevents them from having a smooth conversation with the robot, the majority of students believe they can speak freely with it. Additionally, the robot is incapable of conversing in a context that is not intended for them. Since all of the students are from India and have grown up in an Indian context, there are occasions when communication between them and the robot is difficult. As a result, based on the student interview, it can be concluded that students will benefit from the use of AI Replika in speaking classes provided lecturers or facilitators adapt several of the following activities in the classroom:

Teachers should provide clear guidance.

Students believe that AI Replika won't be very helpful to them, if the lecturers don't give clear instructions. A few students are also perplexed about how to initiate communication with the Replika. They can initiate communication with their AI Replika with the assistance of the lecturers. Here, teaching refers to the lecturers providing a clear context and objectives for each subject so that students know what questions to ask and what topics to discuss with the AI Replika.

Instructors should incorporate speaking exercises with students' peers:

Despite the fact that every student expressed gratitude for AI Replika's availability to assist with speaking practice, speaking with a robot isn't always enjoyable. Certain students have reported that their AI Replika Robot will not respond to them when they are off campus and the Wi-Fi signal strength is not very strong. As a result, some students would rather chat using the chatbot features than engage in conversation with robots. Students can use the vocabulary they learned from the Replika chat session to engage in conversations with their peers in the classroom.

Lecturers should impart cultural expertise:

Replika can introduce students to a variety of linguistic styles even though it might not perfectly capture the subtleties of natural conversation. It's possible that the cultural background and colloquial language of the students aren't always appropriately reflected. Additionally, students miss out on the Cross-Cultural Understanding Course. This cultural knowledge also covers the appropriate level of formality in English, allowing students to practice using the AI in a variety of settings. A couple of students reported that they did not enjoy their conversation with the robot because it discussed inappropriate material.

Instructors are to comment on the students' use of the AI Replika:

Since AI Replika is a machine, instructors must allot time to monitor student progress and offer constructive criticism. Professors have the ability to suggest to their students how often they should practice using the AI Replika and what kind of follow-up exercises they can do. In order for students to feel confident using AI Replika for their independent practice, they also need to be inspired by their mentor or lecturers to believe that what they are doing is worthwhile. A few students expressed that they require confirmation from their lecturer to ensure that their actions are correct.

Benefits of replacing the role of native speakers in lectures with replica AI include:

We were able to ascertain the students' opinions regarding the advantages and difficulties of using AI Replika as their "native-like speaking buddy" based on our interview with them. Among the advantages is that AI Replika helps students learn to speak on their own and is very useful. The majority of students stated that they could learn how to think and speak like native speakers by using AI Replika. Even if they are aware that the native-like model is merely a robot that can respond to commands based solely on the program that was given to it, at least they can engage in interactive practice rather than relying solely on one-way learning—for example, watching YouTube videos. Robots can become aware that their spoken conversation's content or language preference may be unfamiliar to them because the program is unable to read it when they misinterpret it. It gives them the ability to paraphrase their sentences in order to achieve the

conversation's goals and a suitable meaning. Additional responses about Replika's benefits for students include:

Easy Accessibility:

Every student expressed gratitude for Replika's provision of a user-friendly platform for language practice. Students are free to conduct the conversation whenever and wherever is most convenient for them. Students can also practice speaking while they are sleeping, laying on their beds, and pausing and restarting the exercise as needed. Artificial Intelligence Replika offers more regular and adaptable language practice. Because Replika is always accessible, students can practice speaking whenever they feel like it or have some free time. This ongoing accessibility encourages a more reliable and engaging language-learning environment.

Personalized Learning:

Personalized interactions are made possible by Replika's AI capabilities. This tool can adjust to each student's unique learning style and provide practice and feedback based on their needs, which can be difficult in a traditional classroom setting. Some students said they are uncomfortable raising their hands in class to practice, when their lecturers give them the opportunity. A few students also mentioned that occasionally the lecturers' context was beyond their level of comprehension or expertise. Raising their hand and practicing makes them feel uncomfortable. They can tailor their education based on the subjects they are interested in and knowledgeable about by using AI Replika.

Cultural Exposure:

Replika can introduce learners to a variety of linguistic expressions and styles, even though it is not a perfect replacement for the human cultural context. Their comprehension of language use in a range of contexts is expanded as a result of this exposure. Most students become aware that their English production style is not entirely understandable based on the context of their home country, when they encounter confused AI Replika or answers that are disconnected from Replika. As a result, they voluntarily alter the context to better suit their speaking needs. The interactive features of Replika can increase the fun and engagement of language learning. The conversational element of

communicating with AI may pique students' interest and inspire them. AI Replika is entertaining because she is conversant in nearly every subject and situation. Additionally, a few students mentioned that Replika provides fast and reliable feedback on language use. The learning process can be accelerated by this real-time feedback loop, which corrects mistakes and reinforces proper language usage patterns right away. Replika is a useful tool that provides a plethora of advantages for students in the field of language instruction. Its user-friendly platform revolutionizes language practice by enabling students to converse at their own convenience and pace, which promotes more frequent and adaptable language practice (Pentina, Hancock, & Xie, 2023). Replika stands out because of its AI capabilities, which allow for customized interactions based on each learner's unique learning preferences. Students are guaranteed individualized practice and feedback thanks to this flexibility, which is a benefit that is frequently hard to duplicate in a conventional classroom setting. Outside of physical spaces, Replika is an excellent tool for improving pronunciation, because it provides immediate feedback and allows users to practice. This helps to improve spoken language proficiency. By introducing and reinforcing new words in context, it also acts as a guide for vocabulary expansion, enhancing the diversity and richness of the learner's linguistic repertoire. Furthermore, because Replika is nonjudgmental, it fosters a relaxed atmosphere that gives students more confidence to speak, which is a crucial skill for language learning. Because of its adaptability and effectiveness, students can practice speaking whenever they feel like it, which promotes a consistent and engaging language learning environment. Giving regular, prompt feedback on language use helps to accelerate learning by pointing out mistakes early and reiterating proper language usage patterns. Replika exposes students to a variety of linguistic idioms and styles, but it's crucial to understand that, it cannot take the place of the indispensable human component. The ability to track progress over time, exposure to different cultures, and enhanced engagement through interactive learning are all important advantages. However, human interaction and authentic cultural experiences must be combined with AI Replika implementation to create a fully immersive language learning environment.

Lack of true emotional intelligence:

Students expressed dissatisfaction with Replika and many other AI tools due to their perceived lack of emotional intelligence. Empathic or nuanced conversation is one area of language learning where it can be particularly effective because it can be challenging to comprehend and react appropriately to the emotional nuances present in human communication. But they all understand that the robot's limitations stem from its lack, which they can only observe in humans.

inadequate knowledge of the cultural setting some students believe that using AI Replika has drawbacks due to its limited comprehension of cultural context. AI Replika may misinterpret idiomatic expressions and cultural subtleties, if it is unable to fully comprehend the complexities of the cultural context. If the students lose motivation only as a result of miscommunication with the AI Replika, this could be very dangerous.

Lack of contextualized real-world scenarios:

Replika can mimic dialogues, but it could have trouble offering genuine and pertinent scenarios that students would come across in everyday life. As a result, the practical applications of the students' language skills will be limited. It makes sense that there are drawbacks to certain technologies in addition to their advantages. Ultimately, replicas are unable to supplant the profound comprehension and cultural subtleties that arise from interpersonal communication (Edwards & Cheok, 2018). Although this can be a useful supplementary tool, in order for language learners to achieve truly comprehensive language proficiency, they still need to be exposed to real-world conversations with native speakers. While there are many potential advantages to integrating Replika AI into language learning environments, it's crucial to recognize and deal with the difficulties that come with using it, especially when speaking practice is involved. Replika has limitations, such as a lack of emotional intelligence and an inability to fully comprehend the subtleties of cultural context, despite its technological sophistication (Lin & Mubarok, 2021). Some of the challenges educators and students may encounter include the possibility of students adopting artificial and unnatural speech patterns, privacy concerns regarding data handling, and reliance on technology for language proficiency. Furthermore, these tools' static adaptability and speech recognition accuracy

could be a hindrance to offering dynamic, context-rich speaking practice. To create a comprehensive language learning experience that combines the advantages and disadvantages of this cutting-edge AI tool, it is imperative to strike a balance between Replika's strengths and a differentiated understanding of these challenges. After all, students require a model that they can emulate, which they can only get from real lecturers and models who resemble native speakers (Barnes, et al., 2005).

Conclusion:

This study aims to ascertain the advantages and disadvantages of using AI Replika in the classroom as well as how well it is implemented. A total of 40 students enrolled in the fifth semester at SWEC English proficiency Program took part in the research. This paper investigates the students' viewpoints regarding their five months of use of AI Replika as a personal practice tool. In conclusion, using Replika to deliver lectures in place of native speakers shows promise, but it also presents certain difficulties. It is important to carefully weigh the benefits of this approach.

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