
ROLE OF ARTIFICIAL INTELLIGENCE IN ENGLISH LEARNING AND COMMUNICATION SKILLS

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Abstract :

In this highly competitive globalized world, the need of proficiency in English language and communication skills has become one of the top-most priorities. Along with traditional English teaching methods, AI has been emerging as a potential aid in the last few years. There are numerous AI driven software and platforms available to extend real time support and self-regulated learning to learners in developing conversational English skills; however, these tools should be used as a complementary mechanism, not as a replacement to traditional English teaching methods. The present research paper aims to evaluate and analyse the AI based technologies available in the domain of English language learning.

Keywords : Artificial Intelligence (AI), English Language, Communications Skills, self-regulated learning

Background :

English is one of the most used languages for jobs, markets, tourism, discourse and international connectivity. However, English learners face many challenges in gaining English language skills. Extant studies show that AI has affordances to support in English language teaching and learning. Effective communication is proving as the key to success. There is a wide and potential scope to enhance communication with and through Artificial Intelligence (AI), spanning from enhancing individual writing and speaking skills to revolutionizing organizational workflows and building an individual identity. AI acts as a full time personalized communication coach. The present research paper aims to evaluate and analyse the AI based technologies available in the domain of English language learning.

Current study and aims :

The current pilot study aims to evaluate the effectiveness of AI-based communication software in role-playing simulations, specifically comparing its impact with that of human-led role-playing exercises. This pilot study focuses specifically on linguistically diverse engineering students where English is not the primary language, yet English proficiency is a required professional standard prominently in their professional domain of life.

Methods :



A convenience sample of 50 students was recruited from SCET from the stream of Engineering & Technology. Students enrolled in UG programmes were offered the opportunity to engage in this study that was designed to enhance their spoken English communication language skills.

Materials & instruments :

Our pilot study comprised the AI based DLL software ACE, developed by the software company BIYANI TECHNOLOGIES PVT. LTD. and Duo lingo based generative AI system that is capable of both text- and speech-based interaction, as well as automatic conversation transcription. Unlike, currently available LLM models, there were no token limits imposed on the conversation. Students were given one month of access. These scenarios were specifically designed for this project to simulate basic communication.

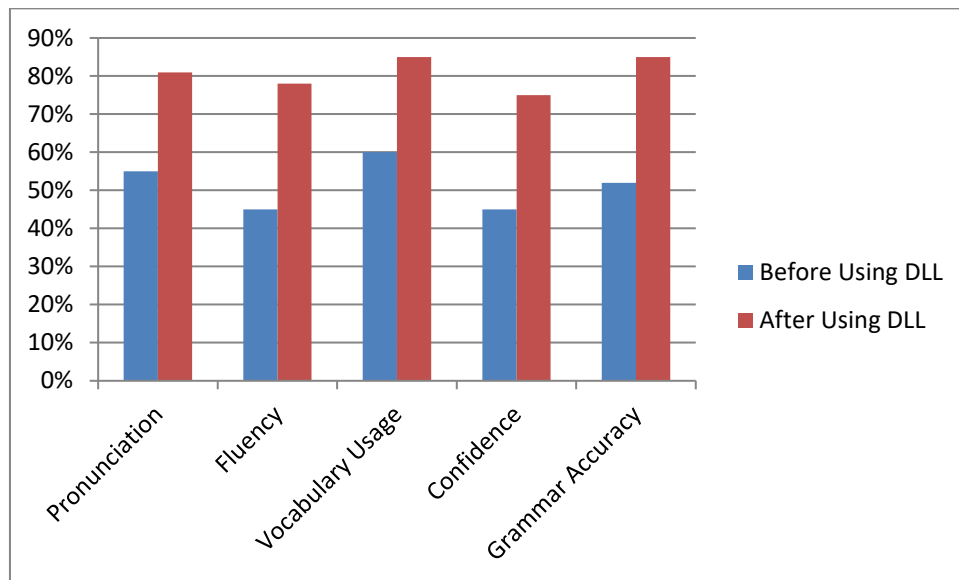
Upon arrival, participants were provided with a Participant Information statement and a consent form and were screened for suitability. Participants were then briefed on the nature of the study. Participants were then familiarised with the AI based DLL software ACE platform and Duo lingo based generative AI system. Students were then given access to DLL software ACE platform and could have as many conversations with the AI Chabot as they wished over one month period. During the intervention, participants were invited to attend a weekly debrief session. The aim of these debrief sessions was to give the students the opportunity to reflect on their own English expression and how the questions were received, so they could rephrase or pronounce words differently.

Results

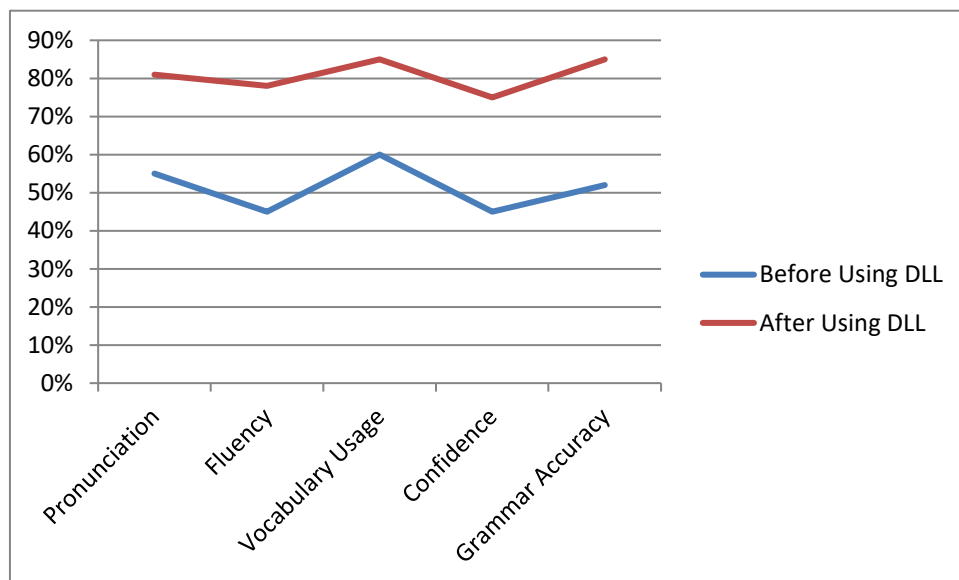
Parameters	Before Using DLL	After Using DLL
Pronunciation	55%	81%
Fluency	45%	78%
Vocabulary Usage	60%	85%
Confidence	45%	75%
Grammar Accuracy	52%	85%

** Above given data is based on observation / survey / assessment of students attending and participating practical and experiments in Digital Language Lab*





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Overall, these results suggest that the intervention with the AI positively influenced English language proficiency and communicative ability.

Overall, the platform was helpful for students for whom English is not their first language. Students enjoyed the ability to practice in the privacy of their own environment. They were also cognisant that they were provided a safe learning environment to practice their English communication skills, one without fear or judgement.

The assessment showed an improvement in overall students' English language skills for the individual measures. Debrief identified that students found the tool helpful; however,



it still had limitations. It suggests that the human–machine interface needs to mimic reality and operate in multiple dimensions, and this is supported by students’ feedback relating to tone and facial expression, as well as their description of the AI experience as ‘not human’. This pilot does not suggest that an AI platform can replace the need to have communication training; rather, it is a way to augment elements of conversation and allow an interactive history taking to occur within a safe environment.

Conclusion :

Given the importance of English language proficiency in engineering disciplines, AI offers a solution worthy of further investigation. Further studies are needed, but early signs show that AI systems have the potential to assist students who have English as an additional language to improve verbal communication skills. This pilot suggests that the AI platform can be used as a form of simulation experience. Additionally, it was important that the AI scenarios were created and contextualised to the relevant discipline. There are numerous AI driven software and platforms available to extend real time support and self-regulated learning to learners in developing conversational English skills; however, these tools should be used as a complementary mechanism, not as a replacement to traditional English teaching methods.

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