



## Language Learning Through AI Technology - LLA (Language Learning Apps)

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### Abstract

Learning is the soul of life. Every living being learns new things each and every day. Especially Language learning is a vital role from past to present generation. The modern world needs a skilled and more efficient people for handling different situations. Innovation was the only slogan for language experts. AI technology opens new window for those who are aspiring and developing language learning. Sounds and signs are the basic elements for language components. In the past, language learning was purely transmitted through oral method. After the peak of technological advancement teaching and learning perspective completely changed. The modern world drifted for AI technology enhances and redefined. English language learning scenes in new approaches Like Dulingo, Babel, Memrise etc. If one is interested in enhancing language proficiency these apps really help and make a great difference in the teaching and learning process.

**Keywords:** Language Apps, Machine Learning, AI Artificial Intelligence, AI Supported Learning.

### 1. Introduction

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision [1]. The above definition clearly indicates that AI has a different perspective. It purely depends on machine learning. The system monitors everything like human beings does, language recognition, recording, analysis, practice and finally proficiency over the particular language. AI technology plays a vital role for language proficiency.

### 2. Modern Trends in Language Learning

LISTENING → PRACTICE → ERROR CORRECTION → GROWTH

**Figure 1** The Nature of Language

The modern world requires skills and proficiency for the English language. That's why the English language is called the universal language. These apps are really helps for one's language thirst. The below diagram show significance of learning apps

and influences of AI, as shown in Figure 2 [4]. For example: if you improve your pronunciation these apps have a space for practice. Moreover, there is an opportunity for listening aborigine pronunciation styles and correcting measures. it may leads listening





- Some of these apps really boost up language interest and in the same way rectifying errors and impact on language learning.
- Convenience and peer review about the language learning process. Learners are enabled to process and improve their communication skills in their own way.

## 5. Discussion

LLA (language learning Apps) offers numerous possibilities of learning. It offers to improve fundamental four basic skills. AI powered tools like LLA makes language learning process positive and more accurate and efficient. If learners can access anywhere and anytime. so the boundaries of space and time crumble into dust.

## 6. Roles of AI powered apps in learning Second Language Acquisition

- **Human-Computer Interaction (HCI):** Language is a crucial component of how humans interact with technology. User interfaces often involve language, whether through text commands, voice recognition, or natural language processing. The design of effective interfaces requires an understanding of how people communicate and interpret language.
- **Programming Languages:** Programming languages are the tools developers use to instruct computers. These languages are designed to be precise and unambiguous, allowing humans to communicate instructions to machines. The evolution of programming languages reflects changes in technology and the ways in which humans want to interact with computers.
- **Natural Language Processing (NLP):** NLP is a field of artificial intelligence that focuses on the interaction between computers and humans using natural language. It involves the development of algorithms and models that enable computers to understand, interpret, and generate human-like text. Applications of NLP include chatbots, language translation, sentiment analysis, and more.
- **Machine Translation:** Language technology plays a crucial role in breaking down language barriers. Machine translation technologies, such

as Google Translate, use algorithms to automatically translate text from one language to another. This has significant implications for global communication and collaboration.

- **Voice Assistants:** The rise of voice-activated technologies, like Amazon's Alexa or Apple's Siri, highlights the integration of language and technology. These systems rely on natural language understanding and generation to interpret and respond to spoken commands [7, 8].

## 7. Results

### 7.1 AI powered Tools at Present

**Chatbots** - A chatbot, also known as a bot, chatterbot, dialogue system, conversational agent, virtual assistant, or virtual agent, is a software application that interacts with users via chat and stimulates human conversations by asking and answering questions via text or audio. Chatbots are commonly found on companies' websites in a range of industries such as marketing, healthcare, technical support, customer service, and education, providing targeted services to website visitors. Generally, a user asks the chatbot a question, and the chatbot interprets the input, processes the user's intent, and then provides a programmed response to the user. Chatbots commonly perform form-filling tasks such as collecting information to confirm someone's identity or information about a problem or an item they want to purchase and then directing them to an answer or preparing the information for a human to easily review. Chatbots have been around since the 1960s when Weizenbaum (1966) developed ELIZA, a psychotherapist bot. They have been developed considerably since ELIZA. 10 Son et al. Other notable chatbots include ALICE and Cleverbot. Web-based chatbots have been utilized for several decades and are commonly integrated into messenger apps such as Facebook Messenger. Chatbots can also have human-like appearances that have social life-like characteristics, which can emotionally immerse users in the experience using text, audio, and other visual cues. These days, chatbots use techniques such as NLP, pattern matching, and neural machine translation to achieve their goals (Huang et al., 2018; Smutny &



Schreiberova, 2020). Interest in chatbots is rising due to their potential to support L2 and FL learning in interesting ways. For learning EFL, Huang et al. (2017) developed a dialogue-based chatbot called Genie Tutor to target specific areas of language learning interest, such as ordering food, or just to chat freely about any topic. For learning a range of languages, the Mondly chatbot was designed as an additional component of a language learning platform. A chatbot has unlimited patience, can instantly respond to requests using natural language, can lower learners' anxiety, which encourages willingness to communicate and self-correct if mistakes are made, can focus on specific topics and areas of interest, and does not require a human teacher or interlocutor. Students can practice aspects of language that they might not feel comfortable practicing with a human or practice recently learnt language

Duolingo is a free mobile app (there is also a web version) and, statistically, is the most popular in the category of Education in Google Play. Studies have shown statistically significant improvements in language abilities as a result of using the app. The app then inquires whether the learner already knows anything about the language, and if so, it provides the learner with a placement test. If the learner is new to the language, they start with the basics. It is safe to say that Duolingo is a very straightforward app and very simple to use. Without any more questions or even registration for the course, the learner can go right into their first lesson by tapping Start. The exercises are of many types:

- Translation exercises, in which the learners translate from the language they know to the language they want to learn or the other way around
- Matching exercises, in which learners see a photo and match it with the words given or the other way around
- Pairing exercises, in which learners are given an even number of equivalent words from both languages and are asked to pair them

- Listening exercises, in which learners listen to a short phrase in the second language and have to type it correctly

Speaking Exercises, in which learners have to say what they hear. Each lesson contains 10 to 15 exercises, a few from each of the categories mentioned above, and learners have a progress bar on the top of their screens. Every time they get an answer right, the bar moves a little bit forward. Every time they get it wrong, the bar does not progress, Duolingo points out the mistake and repeats the question at the end of the exercises until the progress bar is completed. Duolingo also allows the learners to go back to whichever lesson they want, whenever they want, even if they have gotten all the answers right.

Duolingo is a very smart app. For example, if in a translation exercise, learners type "Im not a teacher" instead of "I'm not a teacher", the app will know this is a typo and not a mistake. The learners pass the exercise but are reminded of the typographical error in their answers. Another interesting characteristic of the app is the Dumbbell button that learners can use from the home page of their course. Through this feature, Duolingo offers personalized exercises for each learner, focusing on their weaknesses and improving their skills.

It must be noted that Duolingo does not provide any grammatical explanations. It only immerses the learner in the target language by offering exercises centered on new vocabulary. To learn the grammar, learners must deduce the principles of grammar on their own and through trial and error. Even though Duolingo penalizes the learners for the tiniest of mistakes and points out the most insignificant typos, it does not present the learners with any grammar notes or rules of any kind. Should learners make a mistake in the new language, Duolingo shows them where they have made the mistake, but they will have to work out the rule on their own

## 8. Future Implementation

The most important recommendation regarding the use of AI is to implement it in a minimalistic way so that it will not be a costly solution, however, this simple implementation can significantly increase





the efficiency of the app regarding its learning impact. The most important aspect of AI implemented in language apps would be testing the user based on their progressive development, i.e. for example grammar exercises which would be modified and repeated until the user can successfully apply the given rules. The same can be done in vocabulary acquisition, i.e. the user will be tested the new word in various contexts until they are aware of the use and context of the given word. This is a substantial benefit of AI in mobile apps, probably the most important one because no human teacher is able to process so much information about individual students and the words or grammar each of them needs.

To sum it up the recommends to:

- Implement AI in language apps as soon as possible
- Implement AI in language apps in its simplest form to save money and time
- Improve the AI in language apps over time so that it will not be a costly solution
- The future development of the utilization of AI in mobile apps for learning a foreign language will probably be very abrupt as can be seen in other areas of human endeavor, and it is very strange that our research area still lacks behind. The reason would also be lower profitability opportunities which are connected to these apps. Implementing AI into them would be quite demanding regarding time and money, however, in the long run, the benefits are substantial, both for the user and the company offering the solution with AI. Further development is expected regarding these mobile apps as follows:
- Mobile apps and mLearning will be more and more important
- Higher education institution will be willing to use mobile apps in their curricula
- Individuals and companies will be willing to pay more money for these educational apps

It is also very probable that any mobile app which wants to be attractive and therefore successful will have to implement, to a certain extent, AI, deep learning or machine learning, otherwise it will not

succeed. The users will probably look for this parameter in the app description and it will be a benchmark upon which other apps will be evaluated.

### Conclusion

Artificial intelligence is surely having a great impact on the field of language learning, particularly the English Learning process. In future Artificial Intelligence will lead to great heights and open wider the opportunities in the field of employment and society. Language learning apps was the introduction of changes in the part of teaching and learning. The future generation depends and modifies their learning outcomes will be the basis of learning apps sure. Every tasks and guidance will shape better learning outcome and improvement. Finally, Artificial intelligence spreads its wings and guides a knowledgeable

Society. On a final note, we would like to remind users that although technology does affect the language learning process, it does not provide the silver bullet for that process. What matters, on the other hand, Technology and Human bening stroll Hand in hand.

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