A STUDY ON-ARTIFICIAL INTELLIGENCE IN LANGUAGE LEARNING VIA INTERNET.

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MERIL
SM21JMC018

Under the guidance of
MS. NAFEESATHUL MISRIYA
Assistant Professor

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CERTIFICATE

I hereby certify that this project entitled, **'ARTIFICIAL INTELLIGENCE IN LANGUAGE LEARNING VIA INTERNET'** by **Meril** is a record of bonafide work carried out by her under my supervision and guidance.

Ms. Allu Alfred
Head of the Department

Ms.Nafeesathul Misriya
Research Guide

DECLARATION

I, **MERIL** hereby declare that this thesis, entitled **'ARTIFICIAL INTELLIGENCE IN LANGUAGE LEARNING VIA INTERNET'** submitted in partial fulfillment of the requirement for the award of **MASTER OF ARTS IN JOURNALISM AND MASS COMMUNICATION** is a record of original research work done by me during the academic year 2022-2023 under the guidance of Ms.Nafeesathul Misriya, has not previously formed the basis for the award of any degree, diploma, fellowship or any other similar titles or recognition.

Ernakulam

MERIL
SM21JMC018
Mass Communication and Journalism
Department of Communicative English

ST.TERESA'S COLLEGE (AUTONOMOUS) ERNAKULAM

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Author Name	MERIL
Course of Study	M. A. Mass Communication & Journalism
Name of Guide	Ms. NAFEESATHUL MISRIYA
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Signature of Guide

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ABSTRACT

The future of the world relies solely on advanced technologies. The implementation of artificial intelligence, which is a knowledge based system that uses coded knowledge to reason, learn, act, by synthesizing human intelligence into the machines, after the arrival of cybernetics became common in all the fields. The concept as implemented is proved to be more effective in the most areas of problem solving, natural language understanding, and computer vision. Particularly focusing on the learning of language, the idea helps through machine translation and language bots. From machine translation into foreign language learning, artificial intelligence is completely a pedagogical method and users will definitely find errors and inconsistencies. This guides in a way to correct and improve comprehension or vocabulary in that target language. Here in this paper we will see the exceeded machine abilities which has become an important part of most business and government operations as well as our own daily activities.

Keywords: pedagogy, cybernetics, language bots, artificial intelligence, human intelligence, code.

CHAPTER 1

INTRODUCTION

Artificial Intelligence (AI)

Artificial intelligence combined with a written or spoken user interface should make our lives easier in the future. Assistants such as Siri (Apple) and Galaxy (Samsung) already allow us to control the functions of smartphones through language recognition and synthetic software, while Amazon's Alexa dialog systems will soon control our smart homes: companies based in Silicon Valley are creating a vision of the future. . . where intuitive language communication with a virtual interlocutor plays an important role. AI is used not only to verbally command a smartphone to play a certain playlist, but it also works in much more complex scenarios, such as online games and interactive toys with a language interface (like Mattel's Hello Barbie), as well as virtual teachers. in e-learning environments (such as virtual tutor Ed the Bot in SAP learning software). Therefore, it seems natural to use innovative technologies also in teaching foreign languages. They can enable learning anywhere, anytime. Commercial service providers and non-commercial institutions develop applications that follow completely different technical approaches. Artificial intelligence refers to machines, mainly computers, that behave like humans. In artificial intelligence, machines perform tasks such as speech recognition, problem solving, learning, etc. Machines can act and behave like a human if they have enough knowledge. Thus, information technology plays an important role in artificial intelligence. Information technology involves creating a connection between

objects and their properties. Language learning is an essential skill in a globalising world, as most companies today value employees who speak one or more foreign languages. Although many language resources and tools are available, engagement seems to decrease as users often feel overwhelmed and lack motivation to continue their studies.

Fortunately, there is hope when artificial intelligence is integrated into language learning applications to increase engagement. Today, with the adoption of AI in education, most educational applications use language learning to make the academic experience interesting and productive.

This article provides a critical review to help distinguish between them.

CHAPTER 2

REVIEW OF LITERATURE.

Social media has emerged as a well-liked tool for language learners to improve their language abilities as language learning continues to change over time. Numerous researchers have looked into the usefulness of using social media for language acquisition. Dennen and Bonk (2010) studied the use of social media tools for language learning, including blogs, wikis, and podcasts. The purpose of the literature review method is to collect and isolate the nature of previous research and the results are the basis for various studies because it gives understanding the development of knowledge, sources of decision-motives, triggering factors to generate new ideas and is useful as a guide to explore specific research areas. The findings demonstrated that social media can help with collaboration, introspection, and interaction—all crucial elements of language learning. Even the vlogs that we watch on our Facebook, Instagram, or YouTube profiles have developed into a significant platform for language acquisition. In particular,in a library study, a study conducted in 2017 by Wang and Chen investigated Facebook's potential as a tool for language acquisition. According to the study, Facebook can create a fun and interactive atmosphere where language learners may communicate with native speakers and practise their abilities. In a similar vein, Chen and Chen's (2018) study looked at language acquisition on WeChat, a well-liked social networking site in China. According to the study, WeChat can be a useful tool for language learners to interact with native speakers and practise their communication skills. The difficulties of utilising social media for language acquisition, however, have also been noted by certain

studies. For instance, Chen and Liang's 2019 study discovered that using social media for language learning can cause distractions and information overload. So, social media has its advantages and disadvantages as a tool for language acquisition. To determine the best practices for using social media for language acquisition and to overcome the difficulties involved, more research is required. Digitalization and language learning are both intimately related to artificial intelligence. That's because incorporating AI into people's life will be analogous to converting manual tasks into easier digital tasks. Internet infrastructure is required to support the application of AI in daily life. People claimed that the internet had become a crucial tool for implementing AI in daily life. We are able to communicate across great distances because of the Internet. The findings demonstrated that artificial intelligence technology can be used to boost students' English learning. The findings of the interview demonstrated that students can learn any language in a variety of skill areas, from writing to speaking (particularly pronunciation), with the help of AI-based programmes like Duolingo, Google Translate, and Grammarly. Artificial intelligence can enhance the calibre of language translation with the aid of application development. Numerous research has been conducted to determine how well artificial intelligence works for teaching and enhancing English skills. The employment of AI-based programmes like Netflix and Joox Music can dramatically and successfully increase students' listening skills, according to research done on psychology students at Universitas Sarjanawiyata. Additionally, AI can appear as chatbots that simplify conversation and help people learn new languages. The usage of AI has also been proven to reduce writing anxiety and improve writing skills in other research. Fear of using a foreign language, particularly while speaking to pupils, can lower student learning accomplishment

results. The achievement of student scores in foreign language acquisition would decline when anxiety level increases. Then, according to research by Noviyanti et al, using artificial intelligence (AI) in the form of a spell-checking app can enhance pronunciation skills. The difference between the pretest and posttest score grew by 33 points, from 56 to 90. Therefore, it is thought that the use of spell Checker programmes are useful for improving English pronunciation in self-study. The adoption of AI-based applications can therefore be argued to enhance English language proficiency in speaking, in particular. Researches shows that integrating constructivism theory and virtual reality technology to educate in the immersive context of English college can indeed boost students' English levels. This is true not only for the use of AI-based English applications, but also for the use of other technologies such as Virtual Reality (VR). The usage of AI in the form of virtual assistants, as Lyra Virtual Assistant, is then found to be beneficial in subsequent research. The application of AI can be employed for students' individual learning as well as developed into generic teaching techniques. We need not only be informed about the use and applications of AI in the present English language teaching and learning process, not only enhance the outcomes and models of English language teaching, but also fully integrate AI and English teaching activities and interact productively, and support the advancement of English language education. Artificial intelligence (AI) has the potential to offer a realistic simulated dialogue platform for English language teaching and learning. Numerous AI-based teaching systems have been developed, including DL-OIET, which focuses on evaluating teaching methods based on deep learning, an inescapable pattern of learning. Classification systems are used to personalise how pupils' learning is impacted. Individualised teaching strategies were used, and student activities

depending on their talents were taught. English memory and learning benefit from the creative application of expert AI system expertise processes, which are represented in information points as multidimensional variables. When compared to conventional techniques, some systems that integrate big data and artificial intelligence into the eco-environment of English teaching have been shown to produce higher learning outcomes and English application capabilities. Artificial intelligence technology will make the interaction of English language education from passive to active, completely changing the level of English education that is available, enabling personalised and diverse education, and creating a flexible, transparent, and lifelong ecosystem of individual education. In addition, the system is able to enhance students' comprehensive language skills that demonstrate eligibility, excellence, and the efficiency of situational teaching of junior English with the aid of multimedia. Multimedia English Teaching has also been tested on listening skills, grammar, reading, writing, vocabulary, and student observations that show improvements in academic performance. AI can also be used in a student-centered mode to teach English majors listening and speaking skills. Students have honed their capacity to manage their learning and strengthened their ability to make study plans, apply them, and evaluate the success of learning, as research by Si Wu demonstrates through the use of AI-based flipped classrooms. According to a study, an AI system can increase student satisfaction with a new teaching strategy by 80%. The satisfaction of AI in education, as in the acceptance of AULA as a learning medium that delivers current content and more effective and efficient services, can have a significant impact on the quality of education, service, and information. With the use of intelligent aid to a teacher's everyday activities, it will be feasible to fully address a student's language learning and talents. Students

are encouraged by changes in the digital era to learn as well as be capable of utilising the benefits that are already available. As they have the capacity to build and facilitate the completion of diagnostic processes so that each student's goals may be realised by modifying the curriculum, AI attachments are seen as a helpful tool. When creating teaching-learning frameworks, artificial intelligence approaches can be very beneficial since they can replicate and develop human thought and decision-making processes. They can also deal with ambiguity and make it easier to create environments that support efficient teaching and learning. Translation tools for educational purposes are just one example of artificial intelligence. In this situation, the student can improve their reading, speaking, writing, listening, and emotional expression skills while practising pronunciation. On the other side, students have the opportunity to practise their language while also determining whether it is appropriate or whether it can be translated into the right text. Artificial translation judgements can also be used to choose a language that exactly suits us, a learning method that would be more applicable, and one that makes learning and living more enjoyable and exciting. Research shows that between the pre-and post-test, students' vocabulary, listening, interpretation, and speech skills significantly improve. Students that struggle to master certain concepts in class may benefit from using this adaptive artificial intelligence translation. Thus, it shows that students are motivated to use AI for communication and learning. Finally, it can be deduced that AI has a substantial impact on language learning that extends beyond traditional forms of communication, such as providing rewards, training, and feedback. Consequently, it may be said that AI plays functions that go beyond conversational opportunities, such as motivating, educating, and providing feedback for language acquisition.

CHAPTER 3

HYPOTHESIS

This paper presents a hypothesis on the potential impact of artificial intelligence (AI) on language learning through internet-based platforms. With advancements in AI technologies, such as natural language processing (NLP) and machine learning, there is a growing interest in exploring how these technologies can enhance language learning experiences for learners worldwide. This hypothesis explores the potential benefits and challenges of integrating AI into language learning platforms, emphasizing the role of personalized learning, adaptive feedback, and enhanced language practice. The hypothesis also discusses potential concerns regarding privacy, cultural sensitivity, and the role of human interaction in language learning. It is hoped that this hypothesis will stimulate further research in the field and contribute to the development of effective AI-powered language learning systems.

Language learning is a complex cognitive process that often requires substantial time, effort, and resources. Traditionally, language learning has been facilitated through textbooks, classroom instruction, and language exchange programs. However, the emergence of the internet and the rapid advancements in AI present new opportunities for language learners. This hypothesis examines the potential impact of AI on language learning via the internet and aims to highlight its advantages and limitations.

Personalized Learning: AI-powered language learning platforms can leverage user data and AI algorithms to deliver personalized learning experiences. By analyzing learners' strengths,

weaknesses, and learning preferences, AI systems can tailor language content, exercises, and assessments to individual learners. This personalization can enhance engagement, motivation, and overall learning outcomes. Adaptive Feedback: one of the critical aspects of language learning is receiving timely and constructive feedback. AI technologies can analyze learners' language production, pronunciation, and grammar usage, providing instant and customized feedback. Through automated speech recognition, NLP algorithms, and machine learning models, AI systems can accurately evaluate learners' performance and offer targeted feedback to address specific areas for improvement. Enhanced Language Practice: AI can facilitate immersive language practice through interactive virtual environments. Intelligent chat bots, virtual language exchange partners, and AI-generated conversational agents can provide learners with realistic and dynamic language practice opportunities. Learners can engage in interactive conversations, simulations, and role-playing exercises, enabling them to apply their language skills in practical contexts. Data-driven Insights: AI-powered language learning platforms can collect vast amounts of learner data, including progress, learning patterns, and performance metrics. Analyzing this data using AI algorithms can generate valuable insights for learners, teachers, and platform developers. These insights can inform the design of personalized curricula, identify effective teaching strategies, and enhance the overall effectiveness of language learning systems. Concerns and Limitations: While AI offers significant potential for language learning, there are concerns that need to be addressed. Privacy is a crucial consideration when collecting and analyzing learner data. Language learning platforms must ensure robust data protection measures and obtain informed consent from users. Additionally, cultural sensitivity is essential, as AI systems must account for the diversity of learners and their cultural backgrounds.

The Role of Human Interaction: while AI can provide valuable support, human interaction remains vital in language learning. AI-powered platforms should aim to complement rather than replace human teachers and language exchange partners. The hypothesis argues that combining AI technologies with human guidance can create a more comprehensive and effective language learning experience.

In conclusion, this hypothesis presents the potential impact of AI on language learning through internet-based platforms. It emphasizes the benefits of personalized learning, adaptive feedback, enhanced language practice, and data-driven insights. However, it also acknowledges the importance of addressing concerns related to privacy, cultural sensitivity, and the role of human interaction. It is anticipated that further research and development in AI-powered language learning will lead to innovative and effective language learning solutions in the future.

CHAPTER 4

METHODOLOGY

In this study, we use qualitative research methods. Qualitative research is research that uses a natural environment and aims to interpret recent phenomena using different methods such as interviews, observations and literature review. This qualitative study is conducted through library research and interviews. The survey was conducted online via a Zoom meeting and in person.

Although the interview method used is an in-depth interview where we dig deeper using (based on the purpose and intent of the interview) the assigned topic open questions. The digging is done to find out based on their opinion in examining the problem from the point of view of the respondents. In this study, we wanted to find out the perspective of informants on the role of artificial intelligence in supporting students' English language learning. The methodology used in artificial intelligence for language learning has been into many. Machine learning, Natural Language Processing, Automation and Robotics, Machine vision. In machine learning, it's one of the operations of AI where machines aren't explicitly programmed to perform specific tasks; rather, they learn and ameliorate from experience automatically. Deep literacy is a subset of machine literacy grounded on artificial neural networks for prophetic analysis. There are colorful machine learning algorithms, similar as unsupervised, supervised, and underpinning literacy. In Unsupervised literacy, the algorithm doesn't use classified information to act on it without any guidance. Supervised Learning deduces a function from the training data, conforming to an input object and the asked affair. Machines use underpinning learning to take suitable conduct to increase the price to find the

stylish possible, which should be considered. In NLP, Natural language processing involves programming computers to process human languages to facilitate communication between humans and computers. Machine learning is a reliable natural language processing technique that derives meaning from human languages. In NLP, a machine records the sound of human speech. After the voice-to-text conversion, the text is processed and converted back to speech data. The machine then uses voice to respond to humans. Natural language processing applications can be found in call center IVR (Interactive Voice Response) applications, language translation applications (such as Google Translate) and word processing programs (such as Microsoft Word) to check the grammatical accuracy of text. However, the nature of human languages makes natural language processing difficult, because there are rules for conveying information in natural language. Understanding them is difficult for computers. NLP uses algorithms to identify and abstract the rules of natural languages and transforms unstructured human language data into a form that can be understood by computers. In addition, NLP can also be found in content optimization such as paraphrasing applications that help improve the readability of complex text. Coming to automation and robotics, automation aims to improve productivity and efficiency by making machines perform monotonous and repetitive tasks, leading to cost-effective results. Many organizations use machine learning, neural networks and graphs for automation. With CAPTCHA technology, such automation can prevent fraud in online stores. Developers create robotic process automation to perform a large number of repetitive tasks that can adapt to different conditions. In machine vision, machines can collect visual information and then analyze it. This process uses cameras to capture visual information, convert the analog image into digital data, and process the data using digital

signal processing. After that, the received information is entered into the computer. Two important aspects of machine vision are sensitivity, the ability to detect weak pulses, and resolution, the range to which a machine can distinguish objects. Machine vision can be used in signature recognition, pattern recognition, medical image analysis, etc. Artificial intelligence (AI) has the potential to revolutionize language learning in social media platforms. Here are some ways AI can be used in language learning in social media. Automated Language Translation: Social media platforms such as Twitter, Facebook, and Instagram can use AI to translate posts and comments in different languages. This can be useful for language learners who want to read content in a language they are learning, as well as for connecting with people who speak different languages. Personalized Language Learning: AI can analyze a learner's social media activity to create a personalized language learning program. For example, if a learner follows certain accounts or hashtags related to a specific topic, AI can recommend content in that topic area to improve their language skills. Chatbots for Language Practice: Chatbots powered by AI can provide learners with conversational practice in the language they are learning. Social media platforms can integrate chatbots into their messaging systems, allowing learners to practice language in real-time with native speakers or other learners. Gamification: AI can be used to create language learning games within social media platforms. This can make language learning more engaging and fun for learners, and help them retain new vocabulary and grammar rules. Overall, AI has the potential to enhance language learning in social media platforms by making it more personalized, interactive, and engaging. The conventional graphical user interface (+ speech recognition): Language learners click their way through digital exercises that are highly reminiscent of those contained in traditional

textbooks. The drag-and-drop function is used to match words with pictures or to fill the gaps in close texts. Strictly speaking, such learning scenarios do not even fall within the scope of AI research because they are based on a conventional desktop environment. From a learning psychology perspective, the problem here is that it is mainly a question of moving predefined text blocks back and forth, so learners are given hardly any training in how to creatively and spontaneously formulate their own discussion contributions. Many of the commercial language learning apps work in this way – some are monolingual (*Rosetta Stone*), some use translations (*Babbel*). In didactic terms, even the market leaders base their apps on outdated concepts such as the translation method or pattern drills; this is because highly schematic formats are significantly easier to model. Some of the apps are supplemented by language recognition software that is able to recognize spoken contributions – or not if they happen to be mispronounced. Naturally, this can be no substitute for phonetics lessons given that the technical evaluation of audio data is based on entirely different criteria, such as assessing the probability of sound strings. Thus language recognition can be influenced by unclear pronunciation, whispering or background noise, or intentionally deceived by learners. Furthermore, the apps give no individual feedback about articulation. If learners simply receive an error message in response to repeated oral input, they are more likely to become frustrated than to improve their pronunciation. Language interface with dialogue function: This is an attempt to simulate natural verbal interaction with a virtual tutor that can be described in a narrower sense as AI. These dialogue systems follow the principle of a simple chatbot that helps the learner to communicate intuitively in natural language. Learners are free to make oral contributions that the technology analyses for the presence of predefined

keywords. If the right keyword is used, an appropriate predefined response from the artificial tutor is selected and output. The language input and output can be written or verbal. The English-language version of the language learning app *Duolingo* for example works with a writing-based chatbot as tutor. The problem is that most systems respond merely to simple key words and have great difficulties evaluating whether input is grammatically correct – let alone appropriate to the situation. Such interactive artificial tutor systems work in clearly defined scenarios with predictable dialogues and corresponding error sources. In these contexts, they can teach new content, ask questions and give feedback at a predefined (and ideally selectable) pace of progression. However, this technology is not used nearly as widely in foreign language teaching as its potential might suggest. By contrast, it is already used to some extent in university teaching, such as in the e-tutorials on German linguistics, grammar and orthography that feature Leibniz Universität Hannover's charming artificial tutor *El Lingo*. Virtual learning environments with pedagogical agent systems: Dialogue systems featuring complex avatars capable even of gestures and facial expressions (embodiment) represent the most advanced development. At Bielefeld University, for example, a pedagogical agent called Max is being developed as a virtual museum guide. Museum visitors can chat to him about the exhibits – assuming they cooperate and do not deviate from the predefined dialogue scripts. In foreign language teaching, the problem is that interaction with the agent will only work smoothly if learners input the questions and answers that the system developers were able to foresee. Human responses are only predictable to a limited degree, however. Outside the scripted application areas, dialogues with chatbots and agent systems are erratic, incoherent and prone to error. They cannot serve as a role model for foreign language

learners. Big data analysis: AI efficiency has improved hugely of late, thanks not least to the massive expansion of data storage. The analysis of large quantities of data via algorithms and statistical models can also be used for foreign language lessons – for translation exercises, for instance, and in the form of corpus-based dictionaries. The advantage of working with large collections of data containing empirical remarks made by native speakers is that the foreign language is learnt not as an abstract system but as it is actually used. On the other hand, one problem is that the information analysis relies on a predefined algorithm that does not always search for and deliver what it should. Access to large quantities of data should also improve dialogue systems like *Watson* (IBM). To this end, the systems record every dialogue; this is extremely worrying from a data privacy perspective and should be given consideration when used in the classroom in the near future. Language learning in social media can be a great way to improve your language skills while also having fun and connecting with others.

1. Follow accounts in the language you want to learn: Following accounts that post content in the language you're learning can help you immerse yourself in the language and learn new vocabulary and grammar.

2. Join language learning groups: Many social media platforms, such as Facebook and LinkedIn, have language learning groups where you can connect with other learners and ask questions.

3. Participate in language exchange programs: Platforms like Tandem and HelloTalk allow you to connect with native speakers of the language you are learning and practice speaking with them.

4. Watch videos and listen to podcasts: Platforms like YouTube and SoundCloud have a wide range of content in different languages. Watching videos and listening to podcasts in the language you're learning can help you improve your listening skills and learn new vocabulary.

5. Use language learning apps: Many language learning apps, such as Duolingo and Memrise, have social features that allow you to connect with other learners and practice together.

6. Engage with native speakers: Social media platforms like Twitter and Instagram can provide you with opportunities to connect with native speakers of the language you're learning. Engaging with them can help you practise speaking and writing in the language, and learn more about the culture associated with it. Overall, social media can be a great tool for language learning if used effectively.

CHAPTER 5

DATA ANALYSIS

Artificial intelligence has significantly affected language learning and the tools and resources available to students, as well as the ways in which language learning is approached. One of the most prominent ways in which artificial intelligence is used in language learning is in the development of language learning applications and platforms. These programs use machine learning algorithms to personalise learning experiences, providing learners with exercises, feedback and content tailored to their individual needs and progress.

Artificial intelligence is also being used to improve language translation and interpretation, allowing learners to access a wider range of foreign language resources and content. Machine learning algorithms are used to analyze language patterns, identify contextual cues and improve the accuracy of translation and translation tools. Another area where artificial intelligence affects language learning is the development of chatbots and virtual assistants for language learning. These tools provide opportunities for students to practice their language skills in a low-pressure environment while providing immediate feedback and guidance.

Artificial intelligence is also being used to improve the assessment of language learning, giving teachers and students the opportunity to monitor progress more accurately and determine what needs to be improved. Machine learning algorithms can analyse learner behaviours and performance patterns and provide insights into the effectiveness of different learning methods and materials. Overall, the use of artificial intelligence in language learning

can change the way we approach language learning and provide learners with more personalised and effective learning experiences. Artificial intelligence algorithms have the potential to advance e-learning in all fields. Large companies can use language learning solutions to develop the skills of their employees. Individual learners can use AI language learning to study anywhere, anytime. Traditional schools can use AI language learning to diversify opportunities for students. The benefits of applying AI to e-learning are amazing. Here are just a few of the benefits of machine learning in education prescribed by engineer Mr. Joju George, Robotics lab incharge of Delhi Private School, Ajman, U.A.E. In the interview he said by analysing on this topic,firstly, adapting to student needs is a factor in the use of artificial intelligence in language learning. In a classroom with 25 students, it is practically impossible for a teacher to find an appropriate approach for everyone. But since artificial intelligence is used to learn a new language, the needs of each individual student can be taken into account. When artificial intelligence is integrated into the learning process, teachers can gather a lot of information about students, their interests, abilities, etc. When this data is analyzed, it can pave the way for personalized training.

AI-powered language learning platforms allow learners to work at their own pace, repeating topics and highlighting problems they struggle with, engaging them in tasks they do best, appealing to their interests and taking into account factors such as cultural background. . The data also allows teachers to understand what is going on in the minds of their students and predict their future performance.Secondly he analysed, Providing immediate feedback. With AI language learning, feedback comes fast. After working on an important test, waiting for the results can be stressful. And when you see the mistakes you made a week later, you may not

remember how or why you made them. An AI language learning platform can automatically grade tests and even essays as soon as they are returned, pointing out mistakes and suggesting ways to avoid them in the future. This allows students to take immediate action to correct their mistakes and is likely to do better in future exams. As for teachers, AI language learning solutions can identify weaknesses in their curriculum and help them see what can be improved in lectures or practical assignments, which questions are misleading, and which students need additional guidance.Thirdly he says that- No fear of failure is a concept to use this technology. You can make mistakes - that's how people learn. When students make mistakes, get bad grades, or don't answer questions, they often feel ashamed or even afraid: "What will the teacher say?" AI in language learning does not scold or criticise students, tell them in front of the whole class that they are not smart enough, or threaten them to report to their parents or visit the principal. AI can assess students without judging them. Next, a redefined role for teachers- No, AI will not put teachers out of business, but it will redefine the role of teachers. Instead of being the wise man on stage, teachers become the sidekick, which means that technology covers the daily tasks of teachers while becoming more of an advisor to students. When AI language learning does the grading and paperwork, teachers have more time to coordinate learning and guide students. Teachers who are more interested in technology can also try the role of data scientists, analyse and use the data obtained from the learning. Deeper participation in learning, he says that- thanks to artificial intelligence used to learn a new language, students can learn at their own pace, set their own goals and follow a customised curriculum from anywhere in the world. Teachers do not have to cover the same material every year because they have an individualised approach to learning that varies from student to student. In addition, AI helps

develop engaging games, quizzes, and other learning and exploration activities that connect curriculum with student interests. While applying artificial intelligence in language learning we also come across the following technologies. Chat Bots- Chatbots have come a long way from often useless puppets to intelligent assistants that can trick you into thinking you're talking to a real person. As chatbots become more intelligent, people have started using them to learn foreign languages. All you have to do is dialogue with the AI bot and learn through the interactive process. AI-powered chats provide personalised responses to your messages and can even critique your performance or give you tips on how to improve things. And the best part is that we don't have to face the anxiety of failure, we can talk to the right person. In machine translation - Artificial intelligence technologies such as neural machine translation have allowed machine translation to take a huge leap forward. In addition to better translation quality, neural machine translation can help integrate machine translation into foreign language learning. Machine translation as a bad model is a pedagogical method that enables students to identify and correct inconsistencies and errors in a machine-translated text. It helps students better understand the language and its specifics, as well as improve their understanding of the target language, sentence formation and vocabulary. Personal textbooks- Since people learn in different ways and at different speeds, it is not reasonable to assume that everyone will follow the same textbook and be equally successful. This is why personalised textbooks make so much sense. If a language learning solution knows your progress and adapts to your needs based on your personal data, it can provide you with the learning materials you need. Adapting textbooks can also be beneficial for teachers. If teachers could upload their curriculum to the AI system, the system could create textbooks tailored to a specific school, course or even group of students.

Different studies use different modes in AI. AI language learning algorithms commonly used in EdTech- There are hundreds of algorithms that combine artificial intelligence and foreign language learning to help computers become smarter. Some of them like decision tree, K-Means, Naive Bayes and dimension reduction algorithms can be successfully applied in training. A decision tree is used to—you guessed it—help AI systems make intelligent, informed decisions. And AI should be able to classify the data itself, that's what K-Means and Naive Bayes are for. Finally, AI needs to think fast, and dimensionality reduction algorithms can help when there is too much data. Natural Language Processing (NLP), Colocation Decompression and Point Mutual Information (PMI) are also used to help AI become a valuable tool in language learning. NLP enables machines to read and understand human language; collocation decoding can be used for information retrieval, document classification, and language creation problems; and PMI can measure how much one word says about another. Jojus' experience with Intellias, a global technology partner, AI for language learning- By implementing AI in language acquisition, Intellias knows how to do it right. Together with Alphary, we have created a series of smart learning apps for Android, iOS and NLP to help students acquire English vocabulary. These programs use Oxford Learner's Dictionaries and integrated artificial intelligence called FeeBu (Feedback Butterfly) to mimic the behavior of an English teacher, providing automatic and intelligent feedback.

The program uses a huge amount of authentic English texts to provide contextual vocabulary. FeeBu uses four main criteria to assess a student's success in language learning: grammar, spelling, meaning and word choice. Intellias team implemented a component that automatically generates blank exercises and answer choices when given a title and semantic

context. We've also created a system that automatically marks your writing and analyzes it for grammatical errors.

To provide smooth feedback, they implemented a server-side component that performs natural language processing (NLP) analysis of student responses. Corpus analysis using an n-gram model, collocation extraction and point mutual information allowed us to extract collocations from a huge English corpus to provide reliable feedback on fluency. Intellias worked on semantic word comparison based on a word space model (or distributional semantics) and semantic fingerprinting. Intellias, an application built with Alphary, proved so successful that Oxford University Press, the world's largest publisher of English-language educational materials, purchased it and licensed the technology for global distribution. In addition, Intelias created another application for Oxford University Press, based on the approaches used in the original application, but with a unique character. Years of experience in the field of e-learning enabled Intellias to design and develop an ingenious backend solution for a language learning application based on the globally recognized Leitner flashcard methodology and intelligent NLP algorithms that include data mining, machine learning, corpus statistics. and semantic analysis. The Intelias team reorganised and redesigned the multilingual dictionary, created different language acquisition practices to improve user engagement, and added rewards and achievements to motivate users.

When artificial intelligence and education come together, learning for students and teachers will rise to a new level. Personalization, instant feedback, and adaptation to student needs help students succeed. Artificial intelligence technologies are also improving language learning with the help of language robots, machine translations and personal textbooks.The

data showed that students' self-assessed language skills increased on average after watching a video of their performances. Paradoxically, students rated themselves lower after the second opportunity to self-assess their non-linguistic traits, suggesting the possibility that a combination episodic and non-episodic reflection can prevent some linguistic bias, but it has a negative effect on other aspects of self-image. The results show a trend in certain areas of self-evaluation, especially in the language components, self-judgments that are synonymous with hindering self-development. The students' language scores increased after the video reflection, which may indicate either a false sense of confidence, a bit of a Dunning-Kruger effect where people with limited knowledge or qualifications they tend to rely more on their own abilities than on the language skills of qualified people or student's self-development simply increased, because it was possible to use self-reflection as a goal analyzer (Dunning, 2011). Although it is important to understand the basis of these classifications, this may be the case that strongly argues that improving self-improvement, should be welcomed as a promising result of the thought process. Regarding the non-linguistic elements, students' self-efficacy clearly decreased. This result, in contrast to linguistic reflection, shows initial confidence in the use of body language, which is then modified by available visual cues. Such a response to visual cues was expected and, given the ease of this reasoning task, occurred students get a fair and accurate picture of their performance compared to episodic memory reflection. It should be noted that the purpose of this study was not to determine whether self-based self-reflection exists or whether video-enhanced reflection gave higher scores (indicated better performance) because the presentations studied were mostly student practice presentations that were not initially rated by everyone except the performers themselves.

Follow up to determine if and whether to what extent self-reflection would actually increase students' practical presentation skills is a worthwhile endeavour. Although this is not the purpose of the study, the researchers from different journals found that this task, which includes Rubric-based self-assessment, required students to become accustomed to understanding and applying the rubric to their own performance. That's basically why due to the nature of the study, students spent more time working on the rubric and reflecting the quality of the performances specifically (ie giving you specific numerical points). This extended working hour may have been an important factor influencing the observed quality improvement of final performances (and corresponding teacher performance results) compared to the previous one course repetitions. Showing a clear difference in linguistic and non-linguistic self-assessment ability performance characteristics, students questioned the ability of students to self-reflect. Although students as a whole can intuitively understand nonverbal cues, their sensitivity to linguistic cues can be broad and inconsistent. Teachers and researchers design self-assessments in the future. There may be a need to clearly focus on students' own perceived or actual knowledge of language skills. Not recognizing students' own abilities in this area would be significant to reduce the value of such a task. Overall, this study highlights the effectiveness of technology in the process of self-reflection, especially in the culturally unique environment of a Japanese university classroom. By summoning students to reflect in an independent and private process, self-perceptions clearly changed and by requiring students to understand the individual questions they were assessed on, they were undoubtedly better prepared for their final presentations. The VOSviewer software became used to expose facts distribution via way of means of magazine and via way of means of

country, quotation analyses for writer productivity, and community visualisation for the maximum used keywords. The facts accumulated on this look at for bibliometric evaluation had been from 1990 to 2020, and had been in addition divided into 3 durations, namely, 1990–1999, 2000–2009, and 2010–2020. In mild of a evaluation of the improvement of CALL (Computer-Assisted Language Learning) withinside the beyond 3 many years via way of means of Bax (Citation2011), the above 3 durations had been reviewed with their socio–technical context, respectively as CALL (1990–1999), MALL (Mobile-assisted language gaining knowledge of, 2000–2009), and I-CALL (Intelligent Computer-Assisted Language Learning, 2010–2020). Meanwhile, 3 researchers carried out the facts evaluation procedure, and the inter-coder settlement among encoders reached 81%. The variations had been resolved via means of consensus via discussions and any essential revisions to the present coding scheme. A follow-up evaluation the usage of the revised coding scheme became then accomplished via way of means of any other researcher, who supervised all of the encoded facts to cautiously test the applicability of the evaluation.

In the bibliometric evaluation, seventy one articles had been synthesised, sixteen of which had been approximately machine improvement and not using an empirical proof of scholar gaining knowledge of results. These sixteen papers did now no longer meet our empirical evaluation standards and so had been excluded from the content material evaluation stage. The first empirical AI look at scholars gaining knowledge of results became carried out in 2004. Therefore, we analysed fifty five articles from 2004 to 2020 in keeping with the subsequent 9 standards withinside the coding scheme, and carried out an empirical evaluation of students' gaining knowledge of results in AI-primarily based totally schooling

scenarios.The research from 2004 to 2020 had been divided into 3 durations: 2004–2009, 2010–2014 and 2015–2020, to examine their phased variations. In this look at, the coding strategies of Chang et al. (Citation 2018b), and Qiu et al. (Citation2021) had been used as a reference for the evaluation. The coding scheme consists of the subsequent 9 standards: studies strategies, time on task/ period of the investigation, studies pattern agencies, learners' academic heritage, learners' language talent stages, followed technology (which include AI algorithms and AI structures), language capabilities, the position of AI in language schooling, and gaining knowledge of results. According to the Research strategies, the study strategies are divided into Quantitative, Qualitative, and Mixed Methods.

According to the Learners' academic heritage as viewed by our interviewee Mr.Joju George, the learners' academic heritage is split into six classes: Preschool, Elementary schooling, Secondary schooling, Higher schooling, Cross-stages, and Not specified. Learners' language talent stages- the learners' language talent stages are divided into 5 classes: Beginning, Intermediate, Advanced, Mixed / Cross-stages, and Not specified. The studies which no longer specify the learners' language talent stages are classed as "Non-specified," indicating that the paper is meant to advise a conceptual framework for language gaining knowledge of/schooling programs or expand and compare an AI utility machine. Adopted varieties of technology- according to Heift and Schulze (Citation2007), the following technologies are categorised as Applied AI algorithms and AI structures on this look at. Applied AI algorithms are divided into 12 classes: Evolutionary algorithms, Bayesian inferencing and networks, Search and optimization, Fuzzy set theory, Deep gaining knowledge of/neural networks.

Case-primarily based totally reasoning, Data mining, the Traditional device gaining knowledge of approach, Statistical gaining knowledge of, Natural language parsing, Knowledge elicitation strategies through interviewing area experts, and Others. AI machines are split into seven classes: Natural language processing (NLP), Expert structures/ knowledge-primarily based total structures, Computer vision, Computer speech, Robotics, and others. Language Skills- language capabilities are divided into 8 classes: Listening, Speaking, Reading, Writing, Vocabulary, Grammar, Pronunciation, and Integrated / Whole language. Role of AI in Language Education- According to Zawacki-Richter et al. (Citation 2019), 4 not unusual place classes of the Role of AI in language schooling are proposed with 19 sub-classes. Learning results- based at the studies of Chang et al. (Citation 2018b), the studies subjects are divided into 5 classes: Language acquisition, Knowledge acquisition, Contemporary competencies, Affective or mental states, and behavioural improvement or change. The results show that the number of articles on artificial intelligence in language education increased significantly in 2016. ZawackiRichter et al. (2019), Chen et al. (2020a) and Chen et al. (2022) also showed that AI research in education has grown significantly since 2016, based on which artificial intelligence applications have developed rapidly. As for quantity each journal published the most articles between 2000 and 2019, followed by IJAIED, which is generally consistent with Zawacki-Richter et al (2019); However, they found that IJAIED had the greatest impact articles from 2007-2019. This is probably due to the fact that we also included the conference presentations. Similarly, Song and Wang (2020) and Zawacki-Richter et al. (2019), we found that from 2000 to 2019, most publications were published in the United States. However, Song and Wang (2020) found that the UK and China ranked second and third,

with Japan and Taiwan occupying those positions in our review. It is probably because our research mainly focused on artificial intelligence in language learning, while they studied artificial intelligence in language learning education in general. The review showed that AWE systems were often used in language teaching because of their potential reduce the workload of teachers and help students with writing and revision. In addition, artificial intelligence can be integrated. VR technology helps students practice your target language in simulated environments (Mirzaei et al., 2018). This innovative approach to CMC attracted increasing attention in the later years of the review. Along with the rise several ITS, traditional online learning systems have attracted less research interest in later years. Similarly findings also reported by Johnson et al. (2017). AI applications for learning to write- Artificial intelligence was used to assist students' writing through AWE systems and ITS. These systems evaluate student work using NLP techniques to diagnose and comment on students' mistakes so that they have a comprehensive understanding language use Lee et al. (2015), a correction system called Genie Tutor is designed to improve English write, spot grammatical errors and suggest appropriate expressions. This system led the students to it correct your mistakes in real time, which is useful for language development.

ITS (ie EJP-Write) was also developed to facilitate academic journal writing by Lin et al. (2017). System functions such as borrowing referencing and finding patterns, were useful and effective for students to understand sentences and paragraphs for better language use. AI applications for learning to read- ITS has also been used to improve the reading comprehension of language learners. For example, Johnson et al. (2017) developed ITS, Active Reading and Thinking Interactive Strategy Training (iSTART) for adult literacy for

students. iSTART provided instructional videos and exercises to learn comprehension strategies. It also taught summaries of strategies and provided interactive stories for students to read. The results proved that students had a positive attitude towards the stories. Another example was Wijekumar et al. (2017), which developed the ITS to Teach Structure Strategy (ITSS) to improve reading comprehension. ITSS helped students recognize the structures of the text and gave suggestions and comments in the assessment exercise. The results showed that students using ITS did better than those who did not because the system helped organize the text information. AI apps to learn vocabulary and grammar- One example of AI for vocabulary learning was the study by Chen and Li (2010), who developed a context-aware vocabulary learning system. The system could also suggest new words to learn according to students' free time, i.e. new words would be suggested if students had more time to study.

The results showed that the students who used the system in a contextual way outperformed those who did not. In another study, Pandarova et al. (2019) developed ITS to practice English tenses. This system implemented dynamic difficulty adjustment for customization difficulty levels of grammar exercises. The results showed that the system can provide material at an appropriate level of difficulty and allows students to learn grammar at their own pace, making it useful effective learning. AI applications for learning to speak and listen- Artificial intelligence has often been used to facilitate speaking and listening. Ayedou et al. (2019) developed the discussion agent promoting communication. The agent was created based on communication strategies and effective rear channels. Learners can practise and improve their conversational skills by asking questions to the AI agent which was then answered. In Johnson (2007), students practised speaking skills in games, ie. mission and

Arcade. While playing an arcade game, players must give verbal commands to move the avatar, and in the mission, players speak for their avatars to complete their missions. ASR techniques were built into games to allow students to interact with NPCs to practise speaking and listening. The results showed that most of the participants felt that the game helped them acquire functional skills in the target language. Providing personalised learning experiences- Artificial intelligence can recommend suitable content for students according to their level, needs and desires algorithms. Pandarova et al. (2019), the system could adjust the difficulty level of grammar learning accordingly language skills of students that enabled students to learn at their own pace, optimizing learning outcomes. Similarly, Chen et al. (2006) designed the PIMS for reading development. System recommended news articles in English based on the student's language skills. The results showed that using this personal system to facilitate student reading was effective because it reduced cognitive overload by harmonizing the articles' level of competence of students. Chao et al. (2012), Affective Tutoring System recommends lessons emotional state of students. The system monitored the mood of the students and adjusted the learning material to help students avoid learning anxiety. When the system detected negative emotions, it facilitated learning missions. In this way, students' self-confidence grew, which encouraged them to study. Allows instant adjustment- Artificial intelligence has allowed language learners to adjust their learning after receiving automatic feedback. As discussed, the technologies used in AWE systems can detect errors and provide versatile feedback to learners, enabling them to act immediately For example, in Khatun and Miwa (2016) identified student errors such as stroke production errors and stroke order errors. Students received timely feedback and made immediate changes using this system. In this way

the language of the students' competence could be increased by repeatedly making changes and improving one's work. As for quality suggestions, Gierl et al. (2014) showed that AWE systems can provide rich shape feedback that can overcome teachers' preference for summary feedback due to the time constraints of large classes. Gierl et al to (2014) provided students with AI-based rich and personalised feedback to adjust their learning behaviour during the learning process, not at the end of it. Many opportunities to use artificial intelligence in language learning- The use of artificial intelligence techniques can solve the limited possibilities of practising the target language. ITS makes it possible for students to study anywhere and anytime. Stockwell (2007) developed a mobile phone-based ITS capable of recording difficult words by presenting them more often to increase learning opportunities. Students can too practise the target language when communicating with a digital person. Mirzaei et al. (2018) presented virtual reality conversation that trains learners to interact with an AI agent in the surrounding context simulated scenarios such as negotiations and interviews can be created. Students had more options to practice speaking skills by having conversations in different contexts and which are used more often without traveling abroad. Reliability of AI technology- Although we talked about the effectiveness of applying artificial intelligence in language learning in previous episodes, that is reliability is still an issue. Many researchers have expressed uncertainty about this technology ready for classroom use. Grimes and Warschauer (2010) questioned the accuracy of AWE because it could not evaluate the subjective characteristics of natural languages. Computational semantic analysis mainly focuses on denotative meanings of words, while connotative meanings may not be fully captured. In such cases the system probably doesn't appreciate the writer's intentions, so the

essays are graded incorrectly. Likewise Johnson (2007) noted the challenges of assessing the accuracy of ASR. Because ASR performance varies context, students may not interact smoothly with NPCs. Because the quality of the interaction has a direct impact, efficiency and uncertainty about the quality of student learning can present challenges to the use of AI for learning languages. Solving this problem requires more advanced AI technology and should be done by system developers. Thoroughly test the design of new systems before releasing them. Teacher and student approval- The uncertain effectiveness of using artificial intelligence in language learning is sometimes due to the fact that teachers and students reluctance to use technology. For example, students in Roscoe and McNamara's (2013) study complained that the suggestions provided by the writing system were confusing. Since the quality of AI cannot be guaranteed, students and teachers may have little motivation to use it because of previous negative experiences with technology use discourage them. Lin et al. (2017) found that users with little experience using e-learning tools had a lower satisfaction with ITS and viewed the system negatively due to its differences in technology. Such challenges were also noted by Pokrivcakova (2019), who pointed to a lack of experience with information and communication technology (ICT), which has led to teachers' reluctance to use artificial intelligence technologies. Thus, teacher and student acceptance could be improved by developing better AI-enhanced learning systems that provide better teaching and learning and help develop positive attitudes.

Teacher training programs should also be organized so that teachers understand the potential benefits of AI language learning. Social issues of artificial intelligence in language learning- AI conversational analysis can be biased if the data and algorithms used for training

include social data biases (Yang et al., 2021). Algorithms can contain unbalanced and disproportionate information (Luan et al.,2020), which can lead to social inequality or social cohesion. Moreover, as some developing countries cannot due to the affordability of basic ICT, they are less likely to adopt newly developed AI-based technologies, which can lead to increases in the digital divide and increases inequality in education (Luan et al., 2020).

Hwang et al. (2020) and Zhang and Aslan (2021) also suggested the development of AIEd ethics to address privacy concerns. For example, principles and rules of ethics could be drawn up before using artificial intelligence to prevent leaks. Personal information.

Researchers must screen for biased data or define keywords to filter out sensitive information on choosing natural language processing resources. International organisations could support developing countries by providing essential communication technologies (Luan et al., 2020).

Putting humans at the center of AI applications is an important consideration.

AI must be taken out from technology-oriented applications that emphasise production and performance development to human-oriented applications that emphasise the integration of human and machine intelligence (Yang, 2021; Yang et al.2021). Yang et al. (2021) called this new trend in artificial intelligence human-centered artificial intelligence (HAI), suggesting that some AIEd limitations can be solved with HAI. HAI algorithms, such as bidirectional encoder representations, transformers and generative pre-training can be applied to achieve natural language processing performances that are close to human performances (Yang et al., 2021). This can help increase accuracy in language learning. “Chat bots has also become an medium of language learning”, says Ms.Sahar, french faculty of Delhi Private School,Ajman.

According to research, dialogues using chatbots are mostly very short because users think that a computer is much less intelligent than a human because the computer reacts to it often repetitively and unrelated to topics and context. But the results also show that many participants are very interested in using chat as a conversation partner who speaks foreign languages,because it is available anywhere and anytime, although natives like humans are not easy to find interlocutors Also, students communicate more confidently with the chat, which is of course obvious less intelligent than man himself. It would be pedagogically attractive for the student to speak with an artificial intelligence system that could "really" understand natural language and communicatively create a natural language to form a human-like dialogue. In addition, the main chatbot used in language learning research is Cleverbot, which was developed by British artificial intelligence researcher Rollo Carpenter in 1986 and went online in 1997. The studies show that most students enjoy using this chat also generally felt more comfortable conversing with robots than with a student partner or teacher. However, the results also suggest that chatbots tend to be useful only for advanced and/or highly experienced people or eager language students. Language teachers must also participate and bring chatbot technology with them as a means of constant language practice in the foreign language classroom. Research reported that previous conversation before the classroom conversation with the chat increased the number of comments given by students to the discussion. In addition, preliminary discussion of a chat dress could also increase students' awareness of critical thinking and enable them to develop curious ways of thinking. However, the result of the comparisons of the speaking task with the conversational rat and human partner showed that students' interest in the chatbot tasks decreased significantly, but not in the human partner. The

reason for the decline in interest in chatbot-related tasks was due to the novelty effect. On the other hand, CSIEC reported chat helped students review courses and gave students more attention, confidence and improved students' listening skills and increased students' interest in language learning. The comparison of research results before and after using the chat was excellent in improving student performance. From the above results, it is clear that using chat has provided many benefits in language learning and teaching, how to increase classroom motivation and learning. At the same time, chatbot was reported to be lacking compared to the human counterpart, especially from a new perspective. Multiple studies and chatbot development for learning English is done, but chatbot development and research in teaching and learning in other languages are still difficult to find. When it comes to applications in language learning, which may or may not use AI, basically, the programs have no artificial intelligence, deep learning or machine learning.

Mostly they behave with predetermined algorithms. This feature is obviously necessary, but should only be used as a starting point, then after the first test, the user should receive personalized content. None tested it is not confirmed in applications. Vocabulary is based only on word lists and very simple test paradigms. In some cases, AI is detected a very simple form in the speech recognition functions of the tested applications. Only in applications A and I found traces about the use of artificial intelligence, namely in pronunciation testing. The user must pronounce a specific word and application detect if the spoken word matches the word in the database. Of course, this function requires advanced use of artificial intelligence, but in tested applications it is used only at a very high level in very limited functions. For example, if the user simply imitates the intonation, it will be judged as correct despite the fact that in

reality, the answer was complete nonsense. That's why we know Super Advanced Speech Recognition Siri or Alexa is far from the reality we have available in mobile apps for learning foreign languages. In conclusion, the world around us with different types of artificial intelligence is completely different in comparison to the use of artificial intelligence in tested mobile applications. Many questions arise, such as why this is so and what to do optimise the use of artificial intelligence in mobile applications.

Therefore this article draws attention to this problem because more and more students use these programs to improve their language skills and performance, but regarding the tested applications, we cannot confirm that they optimise use of the available technology. The mobile apps we tried are basically just vocabulary and grammar repositories and don't follow much technological advances that will be available in the early 2020s. We understand that these technological changes are very sudden and five years ago nobody but technology expected them. Companies would be the first to implement them in everyday reality. The second part of the study focused on testing H2 that the majority of users would welcome the application of artificial intelligence in language applications and this application would increase their attractiveness and usefulness 93% of respondents clearly said that the introduction of artificial intelligence would be a positive development. Only 7% of respondents stated that the introduction of artificial intelligence can cause security problems, and therefore not apply artificial intelligence to their language learning applications. This observation is also crucial and should be considered very important for designers of language learning applications. The results of the study are quite surprising; therefore, the capabilities of artificial intelligence

must be reviewed and seeks to enhance language learning enhanced by mobile applications by incorporating artificial intelligence into them. The question is why there is essentially no artificial intelligence in language applications when artificial intelligence has been massively implemented in smart application environments (smart homes, smart cities, e-state, etc). The most important recommendation for using artificial intelligence is to implement it in a minimalist way so that it is not an expensive solution, but this simple implementation can greatly increase efficiency about the learning effect of the application. In artificial intelligence implemented in language applications, the most important aspect would be user testing based on his progressive development, ie, for example, grammar exercises that are modified and repeated until the user can successfully apply the given rules. The same can be done for vocabulary acquisition, ie. the user is tested with new words in different contexts until they are aware of the use and context of the given word. It is essential that the advantages of AI in mobile applications, which is probably the most important, because no teacher can do so much information about individual students and the words or grammar they need. In summary:

- Implement AI in language applications as soon as possible

- Implement AI in its simplest form in language applications to save money and time

- Improve artificial intelligence in language applications over time, so that it is not an expensive solution.

The use of artificial intelligence to learn foreign languages will probably develop in mobile applications very suddenly, as can be seen in other areas of human activity, and it is very strange that our area is still being explored. The reason is also the lower profitability opportunities associated with these applications. Applying artificial intelligence in them would require time and money, but in the long run the benefits are important for both the user and the company providing the AI solution. The following developments are expected for these mobile applications:

- Mobile applications and mLearning are increasingly important
- Universities are ready to use mobile applications in their curriculum
- Individuals and businesses are willing to pay more for these educational programs.

It is also very likely that any mobile application that wants to be attractive and therefore successful must do this and apply artificial intelligence, deep learning, or machine learning to some extent, otherwise, it will not succeed. Users do apparently look for this parameter in the application description and it is the benchmark that other applications achieve appreciated. The purpose of the presentation is to emphasise the importance of artificial intelligence, deep learning and application from machine learning to language learning applications. After analysing the current usage situation from these current approaches, research clearly shows that the application of any form of artificial intelligence is almost missing. The reason for this is unknown, and it is scary to think how much attention is paid to subject marketing and data

mining in other areas of human activity such as business and ICT. However, it is important to underline the importance of its implementation and use, otherwise our education cannot be competitive enough and language learning is losing its sustainability in the global world. This article is an attempt to prove that this issue needs our attention and should be used by IT companies as an opportunity to increase profit. Universities must be ready to contribute to the development. AI has enabled devices and apps to be used in their training processes.

CHAPTER 6

CONCLUSION

The purpose of these reviews is to find out the uses of artificial intelligence in language teaching and learning. This review states that artificial intelligence is a system used to understand natural human speech and is able to engage a flipped approach to language teaching and learning to get more learners competent and productive and able to appreciate human speech. In general, the review confirms the idea that artificial intelligence is most important in language teaching and learning because of its various advantages. Discoveries will come of interest to teachers who plan to integrate artificial intelligence into their classrooms. Regardless, the study is limited by a lack of knowledge about the use of artificial intelligence in other language skills, namely reading, and writing because the overview of the previously discussed articles concerns only its use in speaking and listening. As such, the further review could assess the use of AI in these two capacities to better understand its benefits in language teaching and learning as a whole. Artificial intelligence significantly improves the quality of language learning by adapting to the individual characteristics (talent and background) and expectations (goals and objectives) of each student. Online language learning is extremely valuable in unusual situations like COVID-19 disease outbreak. Future research on AI in language learning is imperative: controversial goals; assessment and evaluation; incentives and motivation; creation of learning networks; diversity and equality.

APPENDIX

1. How does artificial intelligence facilitate language learning?

2. What are the benefits of using artificial intelligence in language learning?

3. How does natural language processing (NLP) contribute to language learning with artificial intelligence?

4. What are some popular applications or platforms that use artificial intelligence for language learning?

5. Can artificial intelligence effectively teach grammar and syntax in language learning?

6. How does artificial intelligence personalize language learning experiences?

7. What are some challenges or limitations of using artificial intelligence in language learning?

8. How does speech recognition technology enhance language learning through artificial intelligence?

9. What role does machine translation play in language learning with artificial intelligence?

10. How is artificial intelligence used to assess and evaluate language proficiency?

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