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## Innovative Approaches in English Learning: AI Smart Chatbots As A Model

### A B S T R A C T

The current study aims to highlight the role of “artificial intelligence-based conversational bots for learning English” as an innovative tool that delivers advanced educational solutions, since it offers an effective and free learning opportunity for all students at all educational levels. It also discusses how to benefit from the capabilities of chatbots, including learning about some text and voice chat programmes designed in artificial intelligence applications for learners of English as a second language. These bots have reached a degree of professionalism, as they have transcended imagination and have entered the fields of creative vision, self-learning, and greatly simulating the human mind. The current study follows the descriptive method in collecting, classifying, and analyzing information by studying literature and previous scientific research related to artificial intelligence technology and its applications. The results of this study are: AI English language learning applications and chatbots offer numerous benefits, including personalized learning, voice recognition, and writing and reading skills development. They provide instant feedback on grammar and writing style, offer flexibility in accessing resources, and enable students to apply English knowledge in real-life contexts.

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الأساليب المبتكرة في تعلم اللغة الإنجليزية: روبوتات الدردشة الذكية المدعومة

بالذكاء الاصطناعي انموذجاً

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مديرية تربية محافظة بابل

الملخص:

تهدف الدراسة الحالية إلى تسليط الضوء على دور روبوتات المحادثة القائمة على الذكاء الاصطناعي في تعلم اللغة الإنجليزية، كأداة مبتكرة تقدم حلولاً تعليمية متقدمة، مما يوفر فرصة تعليمية فعالة ومجانية لجميع الطلاب في جميع المراحل التعليمية. كما تمت مناقشة كيفية الاستفادة من إمكانيات روبوتات الدردشة الذكية، بما في ذلك التعرف على بعض برامج الدردشة النصية والصوتية المصممة وفقاً لتطبيقات الذكاء الاصطناعي لمتعلمي اللغة الإنجليزية كلغة ثانية،

حيث وصلت هذه الروبوتات إلى درجة عالية من الاحترافية، و تجاوزت الخيال ودخلت مجالات الرؤية الإبداعية و الابتكارية والتعلم الذاتي ومحاكاة العقل البشري. اتبعت الدراسة الحالية المنهج الوصفي في جمع المعلومات وتصنيفها وتحليلها من خلال دراسة الأدبيات والأبحاث العلمية السابقة المتعلقة بتكنولوجيا الذكاء الاصطناعي وتطبيقاتها. وكان من نتائج هذه الدراسة: ان تطبيقات و روبوتات الدردشة الخاصة بتعلم اللغة الإنجليزية المدعومة بالذكاء الاصطناعي توفر العديد من الفوائد، بما في ذلك التعلم الذاتي والتعرف على الصوت وتطوير مهارات القراءة و الكتابة، فهي تزود المتعلمين بتعليقات فورية لقواعد اللغة وأسلوب الكتابة، وتوفر المرونة في الوصول إلى مصادر المعلومة، وتُمكن الطلاب من تطبيق المعرفة باللغة الإنجليزية في سياقات و اسلوب الحياة الواقعية.

**الكلمات المفتاحية:** الذكاء الاصطناعي ، روبوتات الدردشة ، تعلم اللغة الإنجليزية ، التعليم الذكي.

## 1. Introduction:

English, the most widely used language globally, is crucial for success in various fields such as science, media, computer systems, diplomacy, business, instruction, and tourism. English is essential for communication, studying worldwide, expanding minds, developing emotional skills, and improving the quality of life. It's the primary international language, with increasing usage due to its global communication capabilities.

Research on English language learning is urgent for international integration. It explores learning concepts, benefits, challenges, and techniques in EFL classrooms. Regardless of age, learning another language is important due to its numerous advantages and the need for tailored learning methods (Anamaria-Mirabela and Monica- Ariana, 2013).

Ali et al. (2022) stated that interest in learning English has surged due to societal aspirations and modern developments. Iraqi educational institutions were forced to adapt to computer software and e-learning, requiring corrective procedures. Schools are crucial incubators of energies and competencies. Developed countries excel in scientific and technical development, resulting in intellectual advancement and positive economic, social, and cultural outcomes.

Moreover, Fitria (2021) and Yuan (2021) explained that the advent of technology and smart digital platforms has significantly simplified English teaching and learning, providing opportunities to enhance English-language skills. English teaching intelligence is crucial for global communication, necessitating the integration of modern technological advancements like Artificial Intelligence (AI) to enhance the English teaching and learning process. AI studies computer-based thinking to mimic human brain functions like memory, reasoning, planning, and problem-solving, while also addressing complex problems requiring human expertise.

Pedro et al. (2019) and Ma (2021) stated that Artificial Intelligence (AI) can create a personalized English practice environment for learners, utilizing all senses to meet their current language proficiency or professional interests.

Based on the rapid and amazing progress that humanity is witnessing and the applications of many areas and activities of daily life in the artificial intelligence sector, UNESCO believes that the development of artificial intelligence applications will have many repercussions in the field of linguistic multiplicity and cultural diversity. The Director-

General of UNESCO, Audrey Azoulay, said, "Although artificial intelligence entails a number of risks facing multilingualism, it also carries within it many opportunities and promises, as it would facilitate dialogue between peoples and cultures through learning several languages and developing means of simultaneous translation." (UNESCO, 2018).

### **1.1 The problem of study:**

English is one of the most widely spoken languages in the world, with a well-structured grammatical system. As a result, Iraqi students have historically found it challenging to acquire English as a second or foreign language (ESL/EFL). In the Iraqi education system, learning the English language to students is a difficult task, especially through online classes. Al-Ibadi (2022) ensured that, in recent years, e-learning and machine learning have been employed as additional educational alternatives. This option has shown to be a successful new approach of learning and teaching in highly developed countries. The Internet and smart technologies have become important tools for creating educational systems, as well as for improving the efficiency of teaching and learning skills in Iraqi educational institutions. Subsequently, the present study examines the best smart applications for students to enhance their English language skills with regard to the usage of artificial intelligence technology in learning English. As a consequence, AI's applications may aid in the development of English learning reforms in Iraqi educational institutions.

### **1.2 The aims of study:**

This study aims at:

- Exploring the role of Artificial Intelligence (AI) in English language learning (ELL) and identifying its applications in developing contemporary trends in English language learning.
- Identifying the benefits of AI's applications in the field of learning the English language.

### **1.3 The questions of study**

The study's questions include:

- What are the most suitable AI's applications used in English language learning (ELL)?
- What are the benefits of AI's applications in the field of English language learning (ELL)?

### **1.4 The significance of study:**

The research is supposed to be significant for students, teachers, decision makers, course designers, and researchers. Artificial Intelligence (AI) can enhance teaching methods and improve language skills. It can also benefit decision-makers in education, course designers, and researchers by promoting positive perceptions and attitudes towards EFL teaching and learning. It can also be used to design suitable EFL syllabuses and strengthen theories on new technology tools.

### **1.5 Method:**

This systematic literature review aims to analyze and interpret findings on AI chatbots for learning English, based on predefined research questions.

## 2. Literature Review

### 2.1 Smart Digital Technology in Education

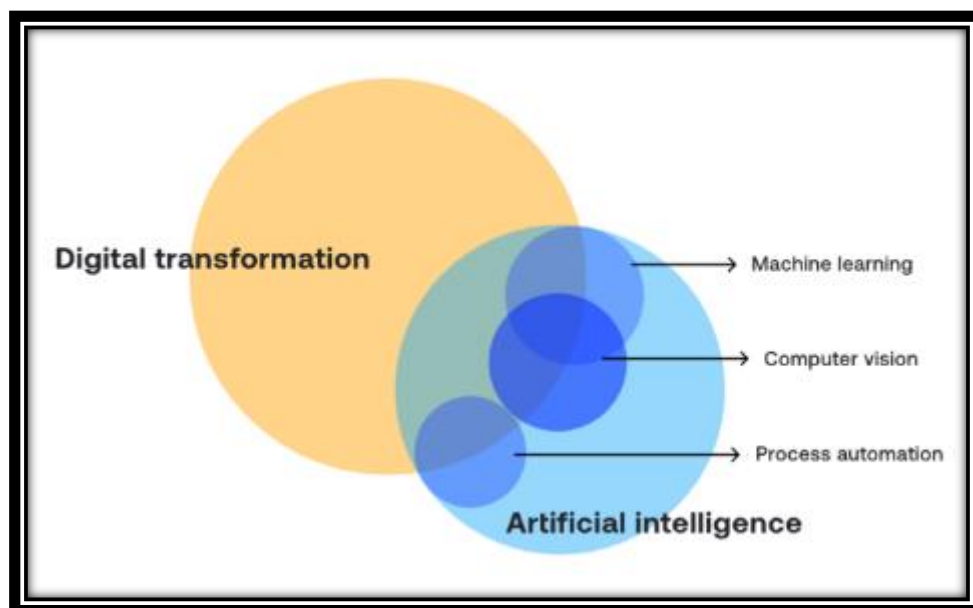
Digitalization opens up new possibilities for education. The integration of educational technologies, including smart devices, has led to the need for modern teaching methods to achieve educational goals and improve academic achievement. Digital learning technologies can enhance education skills, motivation, creativity, and positive attitudes, leading to improved achievement and innovation.

Digital learning utilizes information and communication technologies for interactive, online learning experiences, including communities of practice, knowledge management systems, work-flow-learning, and forums (Sousa & Sousa, 2019).

According to Darshan Singh et al., Smart Learning Environments (SLES) are crucial for educational institutions to provide a motivating and engaging learning experience. Innovative technologies enable greater engagement, flexibility, and feedback, leading to a learner-centered learning context. Global projects like Malaysia's Smart School Implementation Plan demonstrate this (Darshan Singh et al. 2018,).

Spector et.al (2016) stated that “students and teachers are the two most important factors in any educational system. In this information age, digital learners and digital teachers have new characteristics involving the use and integration of technology into learning and instruction”(p.54).

Jean-Francois expanded further, suggesting that digital devices are transforming learning, shifting from content-driven to information-driven and problem-solving perspectives. This shift is reflected in experiential learning, where students move from content to connections through direct experience and reflection(Jean-Francois, 2018).



**Figure (1): The conceptual relationship between digital transformation and AI according to (Alteia, 2022)**

In response to the above, digital transformation in the field of education is one of the important developments occurring in the modern era, and among the prominent digital transformation tools is AI. It plays a crucial role in improving and developing education and its future. Artificial intelligence is used to analyze educational data, improve the learning experience, and provide education tailored to the needs of each student. Basically, AI is a technical solution, a system, or a device that aims to mimic human intelligence to perform tasks while improving itself iteratively based on the information it collects. Machine learning is a subset of artificial intelligence that focuses on building a software system that can learn or improve performance based on the data it consumes.

## **2.2 Evolution of AI: A Concise History**

Artificial Intelligence (AI) is a rapidly growing field that has the potential to revolutionise many aspects of our lives. AI is used in many applications, from self-driving cars and personal assistants to medical diagnosis and financial forecasting. But where did this technology come from, and how has it evolved over time?

The evolution of AI can be divided into stages. An artificial neuron model was introduced in 1943, ushering in the age of artificial neural network research (Kandpal & Mehta, 2019).

One of the earliest and most influential figures in the field was Alan Turing, a British mathematician and computer scientist often referred to as the "Father of Modern Computing." In 1950, Turing published a paper entitled "Computing Machines and Intelligence" in which he proposed the "Turing Test" as a way to determine whether a machine could be considered intelligent (Hermans, 2023).

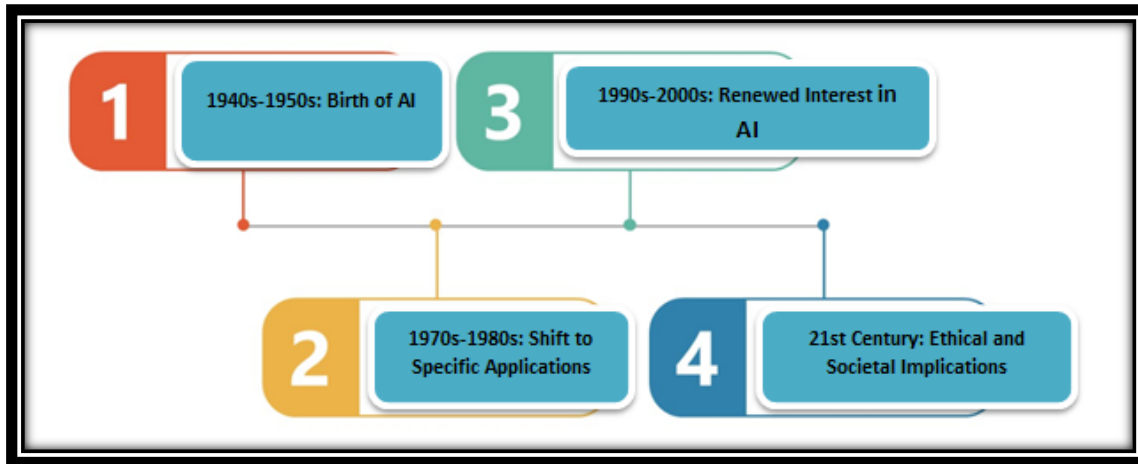
In the 1970s and 1980s, AI research shifted from creating intelligent machines to developing specific applications that could perform specific tasks. One of the most thriving areas of AI during this time was expert systems. They designed to mimic human decision-making abilities, emerged as a thriving area, successfully utilizing large amounts of data and rules in fields like medicine, finance, and manufacturing (Sardar & Pandey, 2024).

In the 1990s and 2000s, there was renewed interest in AI, driven in large part by advances in Machine Learning (ML). It is a subset of AI that involves the use of algorithms to automatically improve system performance based on data (Bhukya, 2021, 3). Moreover, Neural networks, modeled on human brain structure, have revolutionized machine learning by learning and adapting to data inputs, leading to significant advancements in image and speech recognition (Mire & Tyagi, 2022).

During this time, machine learning advancements like Support Vector Machines (SVM) and Decision Trees (DT) were introduced, enabling classification and prediction of outcomes. These techniques have been applied in various fields, including natural language processing, financial forecasting, and drug discovery. Big data also played a significant role in this progress (Bhatia et al., 2023).

AI, a rapidly evolving technology, holds immense potential in the 21<sup>st</sup> century. However, it also comes with significant ethical and societal implications. The history of AI, spanning from early automatons to advanced neural networks, reflects humanity's continuous

innovation and a prelude to a future yet to be written. It is emphasized that AI technology is already affecting our lives in various ways and that its impact will continue to grow. As this technology becomes more powerful, it is crucial for society to engage in discussions about its ethical implications and how it should be harnessed. The future possibilities and challenges of AI are immense, and understanding its potential is essential for shaping our world.



**Figure (2): A Simplified Outline of the Evolution of AI**

### 2.3 Understanding AI: Key Definitions and Concepts

Multiple Intelligences (MI) is a widely investigated learning theory influenced by educators such as Howard Gardner, Bruce Campbell, Thomas Armstrong, and Mary Ann Christison (Alwan, 2016, 3). The Oxford Learner's Dictionaries (2024) define intelligence as the capacity to acquire and apply knowledge and skills, including the ability to learn, understand, and think logically. Moreover, to Al-Jwaid (2022), the intelligence is the ability to think critically, reason, draw conclusions, and solve problems, as well as communicate efficiently, quickly, and effectively.

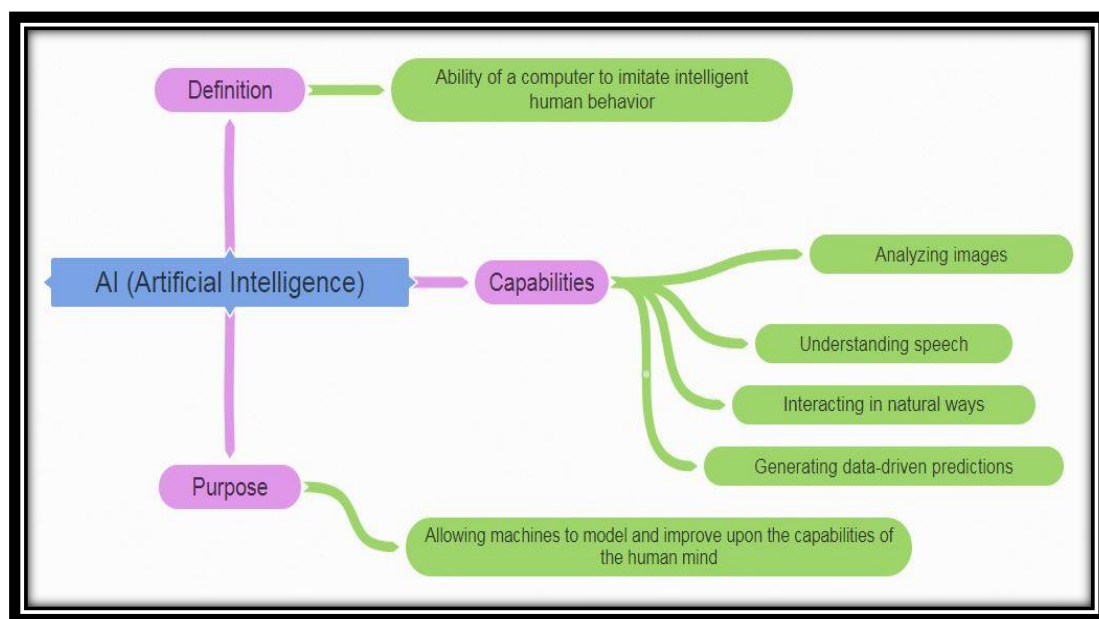
As mentioned by Potode & Manjare (2015), AI and its applications in the field of e-learning have played an essential role in instilling intelligence in e-learning tools and techniques. For the last two decades, the internet has been utilised to increase communication, collaboration, resource sharing, supporting active learning, and delivering education via distance learning. In recent years, many educational institutions throughout the world have begun to offer online services such as virtual (online) learning environments in order to enhance lifelong learning and make it compatible with other educational management operations.

To Luckin et al. (2016), AI is an interdisciplinary approach and a broad branch of computer science concerned with building intelligent machines capable of performing tasks that typically require human intelligence.

Musa and Bilal (2019) defined AI as the creation of computer programs that engage in tasks that are accomplished satisfactorily by humans, because they require higher-level mental processes such as perceptual learning, memory organization, and critical thinking.

AI, simply described, is a set of technologies that mix data, algorithms, and computer power ((European Commission, 2020). Machines that accomplish tasks that would typically need human intelligence, particularly when the machines learn how to do those tasks from data (UK Government, 2021). JISC, on the other hand, outlined AI as theories and techniques created to enable computer systems to perform tasks that would normally require human or biological intelligence (JISC, 2022).

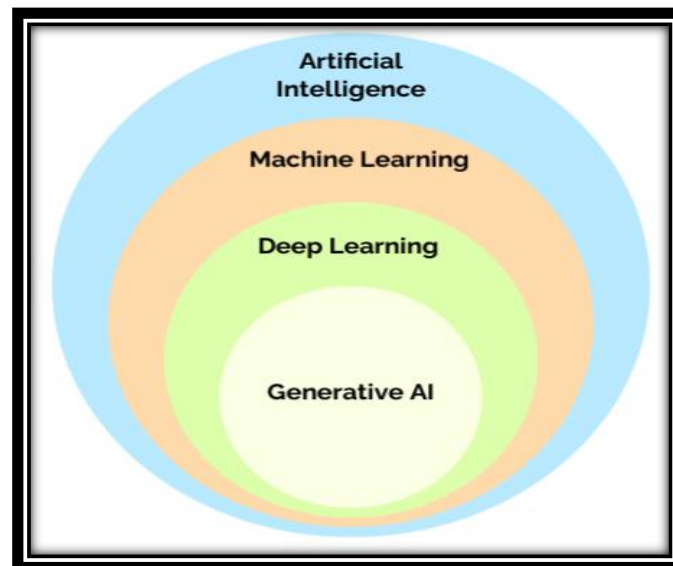
Based on the foregoing, AI is the ability of a computer to imitate intelligent human behavior. Through AI, devices can analyse images, understand speech, interact in natural ways, and generate data-driven predictions. AI allows machines to model and improve upon the capabilities of the human mind. AI is the advancement of computer-related technologies and machinery, enabling computers to perform functions near-human-like.



**Figure (3): The concept of Artificial Intelligence (AI)**

#### **2.4 Artificial Intelligence, Machine Learning, Deep Learning, and Generative AI**

Artificial Intelligence (AI) is a field that enables computers to mimic human behavior, learning, making decisions, and solving complex problems. AI aims at creating intelligent machines that can replicate or surpass human intelligence, exemplified by chess computer. Machine Learning (ML) uses advanced algorithms to detect patterns in large data sets. ML is a subset of AI that enables machines to learn from and improve upon existing data, exemplified by online shopping, to make decisions or predictions. Deep Learning (DL) uses neural networks for in-depth data processing and analytical tasks. DL is a machine learning technique that uses layers of neural networks to process data and make decisions, exemplified by voice assistants like Alexa or Siri (Theodosiou, & Read, 2023). Generative AI, a subset of DL models, generates content based on input using a mix of supervised and unsupervised learning, using multiple layers of artificial neural networks to simulate human perception and understanding. Generative AI is a tool that generates new content based on prompts or existing data, such as ChatGPT (Foster, 2022).



**Figure (4): A Comparative View of AI, Machine Learning, Deep Learning, and Generative AI. (Popova Zhuhadar, 2023)**

### **2.5 The Use of AI in Modern Educational Practices (AI in Education)**

AI is utilized in education to enhance the learning process, lesson effectiveness, and student experience. It analyzes student responses, provides feedback, and identifies difficulties, offering personalized learning support. This technology enhances educational practice, improves education quality, and improves student interaction with educational materials.

UNESCO recently issued the “Beijing Consensus - Artificial Intelligence and Education,” which recommends that all countries develop corresponding policies and investigate effective strategies and practices for implementing artificial intelligence to promote educational innovation (Wang et al., 2021). With the in-depth integration of AI, education has tremendous potential to advocate for the growth of human society.

According to Sevara (2023), innovative technologies in education, including AI, have revolutionized teaching methods, enabling the creation of computer systems capable of human-like language comprehension, problem-solving, and translation.

AI has significantly improved educational purposes in education, providing benefits such as speed, accuracy, and consistency. In certain disciplines, AI has been used to facilitate multidisciplinary learning through individual learning frameworks. Even in single disciplines like linguistics and language acquisition, AI has shown positive results. In a study of 82 Japanese students, students who adopted AI outperformed those who did not by 32 points in the TOEIC test. Surveys show that AI can improve English overall, listening, speaking, reading, and writing skills (Almaraz-Menéndez, 2022).

The use of AI in education enables individual-driven learning, simplifying teaching and administration processes. AI enhances educational equity and quality in developing countries. A new hybrid model emerges, benefiting students, teachers, and administrations. Data analytics improves educational system management.



## 2.6 AI-Powered Chatbots and Applications for Learning English

As AI technology advances, many AI products are being applied to the education industry. Numerous governments throughout the world have also enacted rules to encourage the use of AI technologies in education. As mentioned by (De la Vall & Araya, 2023), there are various AI language learning tools, each with its unique purpose and features. The following examples are presented:

- (a) **Machine translation tools:** AI language learning tools include automated translation tools, which employ AI algorithms to automatically translate text or speech between various languages.
- (b) **Language tutoring systems:** They offer personalized interactive lessons and feedback to help students improve their grammar, vocabulary, and conversational abilities. These tools are frequently found in smartphone applications or online platforms, but they can also be found in software programmes or websites.
- (c) **Language generation systems:** They use AI algorithms to generate original content based on parameters provided as inputs and can produce news articles, reports, or social media postings. They are frequently found in software programmes or online platforms like OpenAI's GPT-3 and Hugging Face's Transformer (De la Vall & Araya, 2023).

On the other hand, other AI language learning tools, such as chatbots that use NLP (natural language processing) algorithms, are capable of being utilised to practise language skills or to deliver guidance and support to users in several languages.

As such, Jung (2019) mentioned that Chatbots are AI-developed English language learning tools that evaluate students' language proficiency and adjust conversations based on their level, making them effective tools for language practice. In these tools, robots train and store information to understand student strengths and weaknesses, providing personalised lessons based on student level, speed, and preferences. Chatbots, also known as conversational bots or conversational AI, conduct conversations via auditory or textual methods, revolutionising language learning by enhancing learners' communication skills without human interaction.

The teachers can use AI-powered chatbots and applications that help students learn English through:

1. Utilise AI to enhance your English skills by selecting a suitable chatbot and creating an account online, among the numerous free options available.
2. Set up an account and ask questions to your chatbot to improve English skills. Here are some questions to get started:
  - **Practice a conversation:** Can we talk about shopping? Write a conversation between a doctor and a sick person. I want to have a conversation with my teacher about the last exam. What should I say?
  - **Learn grammar:** When do I use the present continuous tense? Write six if statements about something that might happen in the future. Write a story about the ancient Babylon city using the passive voice.
  - **Learn vocabulary:** Can you give me a list of words about the airport? Write six sentences about hobbies.

- **Improve writing:** Check my grammar: [enter a text]. Can you suggest different words in this sentence: [insert a text]? Can you give me feedback on my answer? [Use this after a conversation with a chatbot.]

The most effective AI-powered chatbots and AI- applications for improving students' English language skills are:

- 1- **Mondly** is an AI language learning tool that uses chat bot programmes to teach students how to pronounce a language through phone or computer communication. It has 33 languages to choose from. You can also choose the difficulty level. It is an augmented reality application that uses chatbot technology and speech recognition to facilitate verbal communication with virtual characters in real-life situations and giving feedback on their pronunciation (Symonenko et al., 2021).

#### ***How can the learner use the Mondly app?***

- The learner doesn't need to set up an account to use the app.
  - After each lesson, the learner will be given a list of vocabulary.
  - When the learners open the app and get started, they are going to choose the language they speak (for example, choosing Arabic) and the language they want to learn (for example, choosing English).
  - Select the level and now the app will show you a small tutorial on how the app works and how to use it. The learner can skip this part if he wants.
  - The learner can activate a trial period, opting for a free daily notification for free lessons or paying for additional options.
  - With a simple click, the learner can choose the lesson he wants to learn today. For example, he can drag the translated word to the correct meaning. He can also click on the word for the correct pronunciation.
  - The learner is presented with a word or sentence and is asked to select the correct meaning or form. They can learn about verbs by tapping on them for present or past information. In subsequent lessons, they are presented with a sentence and given the translation or meaning. After each lesson, they are provided with a list of vocabulary learned.
  - The Mondly app offers a conversation with a native speaker, allowing learners to answer questions or choose answers from provided options. If the learner doesn't hear, he can tap on the sentence for repetition. The app also provides a summary of the lesson for reading after completion.
- 2- **Duolingo** is a popular AI-based English language learning application recommended for beginners. As it is a free English language learning programme that is very enjoyable for practicing the language, it uses exercises for grammar, conversations, and listening, and its lessons consist of a set of activities that adapt to the students' learning style. Duolingo's game-based learning system helps students learn English quickly. The exercises are designed to help students learn new words and vocabulary effectively. It is a free language learning app that incorporates AI, machine learning, and gamification to enhance the learning languages experience. The app employs a machine learning function known as "birdbrain" which can determine whether students are more likely to get something right or wrong (Opyr & Panchyshyn, 2022).

### ***Getting Started with Duolingo (A Step-by-Step Guide):***

Learners can get started with Duolingo as follows:

- Download the app: Look for the green owl icon in the App Store.
- Getting Started: Choose "Get Started" for new users. Set up an account and choose your target language.
- Learning Process: Start from scratch or find your language level. Use exercises like matching, listening, and speaking practice.
- Create a Profile: Use a parent's email address for under 13, and school email for password resets.
- Join a class: Enter a code provided by your teacher in the 'Duolingo for School' section.

**3- Andy** is an AI-powered tool designed for English language learning, offering various grammar and vocabulary options for both beginners and advanced learners. It provides explanations, short instructions, and quizzes at the end of lessons. If a student makes a mistake, Andy corrects it during chat. Andy is a free app on Android and iOS that aids in learning grammar rules, vocabulary, and engaging in linguistic parlour games, providing a solid foundation for beginners (Othman, 2023).

**4- Memrise** is a renowned language-learning chatbot software that incorporates a gamified system to teach users numerous tongues using interval-based flashcards and memory tactics. Learn Languages with Memrise is a 2017 app with over 200 language lessons by renowned linguists. It offers sentence patterns, pronunciation, native speaker videos, and chat and linguistic skills practice. With over 20,000 native speaker videos and new chatbots, users can learn anytime and from anywhere, including distant areas. Memrise uses gamification to keep users engaged (Armie et al., 2023).

Memrise is an app that offers a user-friendly and engaging language learning experience. Teachers can choose from pre-made courses or create their own courses to enhance a specific topic or language area. Memrise uses adaptive 'spaced repetition' learning technology to help learners focus on the words they need to learn. Teachers can track learning progress, share links, and create courses for students. Memrise also encourages social interaction, allowing learners to create and share learning resources, especially for older students. The app offers courses in various subjects, such as arts and literature, Maths, and science. Moreover, Memrise uses a smart system to help learners remember language items, stimulating the senses, imagination, and emotions, making learning more fun and effective.

**5- LingoDeer** is an AI-powered English language learning tool that offers organized, curated topics to gradually increase familiarity with the new language. Students can progress at their own pace through self-study and exercises for reading, listening, speaking, and writing skills. Lingodeer is a language study app with numerous courses in multiple languages. It teaches language skills via interactive courses and tests (Rizoqulovna, 2023).

**6- TalkPal** is an AI-powered language learning app that helps learners improve their speaking, listening, and writing skills. It uses a conversational approach to language learning, allowing learners to practice their English with native speakers and AI-powered chatbots. The app offers a variety of features, including: speech recognition, conversation practice, vocabulary building, and grammar practice.

- 7- **Rosetta Stone** is an AI English learning app designed to teach the language effectively, suitable for both children and adults, through exercises designed to learn English words. Rosetta Stone's Dynamic Immersion technique combines interactive and contextual language training with Extended Learning capabilities (Karasimos, 2022).
- 8- **Babbel** is an intuitive AI English practice tool that focuses on lessons, vocabulary, grammar, conversation skills, and word learning through voice and image recognition, spelling, and filling in the blanks. Babbel is a language learning software that offers classes in a range of languages. It emphasises practical vocabulary and conversation skills through interactive exercises and conversations in which students can practise speaking and listening. Babbel offers 13 language courses, including Chinese, Turkish, and Dutch, with phonics exercises for pronunciation improvement. In this app, speech recognition helps users verify correct pronunciation (Selvitella, 2019).
- 9- **Sentence Master** is an AI-based English learning app that guides students to construct sentences by matching words together. It offers interactive learning and challenges students to deconstruct and form useful sentences within a specified timeframe, ensuring efficient usage of time (<https://www.masterkeygames.com/>).
- 10- **Speakify** is a free spoken English AI app that helps users practice their English skills without anyone else, improving proficiency and building confidence in speaking. It features real-life conversations, instant feedback, and interactive learning, allowing users to practice pronunciation and receive hints. The app also provides feedback and rewards progress, creating a supportive environment for English learners (<https://www.speakify.ai/>).
- 11- **Lingbe**: It is a community where native speakers help each other learn a foreign language. It has a simple user interface, requiring users to choose their native language and study language, and provide information about their interests (Lingbe.com).
- 12- **ChatGPT**: It is a computer program designed to understand and respond to human language in a natural, human-like way. It's a virtual assistant or chatbot that can understand and respond to written or spoken language. It has been trained on a large dataset from the Internet and can be used for a variety of tasks such as answering questions, translating languages, and even writing creative text. For example, it can be used in EFL education to create an intelligent learning system that can understand and respond to students' queries. Moreover, ChatGPT can create dialogues that challenge and teach EFL students how to use new vocabulary and grammatical structures in context, bridging the gap between theoretical learning and practical application. Moreover, its ability to provide instant feedback allows EFL learners to correct their mistakes in real time, promoting an effective and encouraging learning atmosphere (Koraishi, 2023).

Chatbot apps are computer programmes that replicate human-user debates and respond instantly to requests or commands. They are particularly beneficial for language acquisition since they allow users to practise their skills without fear of shame or criticism. These apps also allow users to practise English at their own pace, which is very useful for people who find conventional instruction in class difficult or intimidating. Therefore, modern technologies, such as AI chatbots, are influencing EFL learners by providing intelligent

assistants in everyday activities. These mobile applications can communicate using natural language, act as intelligent tutors, and provide feedback on students' progress. As mobile devices spread, AI chatbots can also support human tutors by answering queries and offering direction.

## **2.7 The Instructor's Role in English Learning with AI Chatbots**

The role of AI's chatbots in English learning is evident in many aspects, as they clearly contribute to developing the educational system by improving the performance of teachers, and enhancing learners' interaction and participation in the educational process. The instructor has a leadership role in managing the class, promoting communication, and using effective methods like reinforcement, constructive criticism, and student ideas to foster healthy classroom interaction. The role of the instructor in learning English using AI's chatbots is to:

- Encourage learners to view AI as a tool to aid their efforts and perseverance, to explain how AI works, and to allay any concerns or misunderstandings about its use.
- Encourage learners to improve their learning experience and enhance the effectiveness of the educational process by employing digital tools and smart applications, such as AI chatbots, smart educational platforms, and machine learning.
- Use chatbots as an aid in formulating tests and teaching plans for different classrooms. This involves first sharing the curriculum with ChatGPT, for example, then requesting the creation of questions and tests of the curriculum and creating highly effective teaching plans.
- Encourage learners to enhance their conversational abilities by conducting conversations with the chatbot, using it to translate incomprehensible phrases, and helping them improve their ability to write in English. Moreover, the teacher can create contextually relevant and level-appropriate reading materials that incorporate new vocabulary seamlessly, making it easier to address the individual needs of learners.
- Analyse the learner's performance and identify his/her strengths and weaknesses. The teacher can also track learners' progress, provide immediate feedback and guidance to help improve their performance, and provide additional educational resources tailored to individual students' needs.
- Enhance interaction and collaboration among learners to help them communicate using chatbots and share resources and ideas. These bots can also help provide platforms for group discussion and promote active learning.
- Teach learners how to responsibly use the internet and AI tools while studying, using resources like ChatGPT. Teacher should remind learners that the answers provided may not always be reliable, and they should review them carefully to ensure they are from other reliable sources. This enhances the learners' critical thinking, problem-solving, and creativity.

## 2.8 Benefits of AI-driven Tools and Chatbots in English Language Learning

AI is transforming the way students learn English by offering personalised instruction, analysing students' strengths and weaknesses, and developing learning paths for focused advancement in grammar, vocabulary, and pronunciation. According to Goundar et al. (2022), AI offers numerous benefits to students, teachers, and administrations, including:

### 1- For students:

- AI in education enhances students' learning by providing feedback, making the process comfortable, responding to needs, personalising materials, emphasising subjects, repeating mastered content, and monitoring attendance and progress.
- AI proposes personalized learning models, identifying students' interests, providing relevant coursework, immersive experiences, continuous access, reducing academic pressure, and enhancing teacher-student interaction.
- AI enhances students' learning experiences by providing early, adaptive, online, and language learning, predicting moods and progress, and offering personalized content, making learning more engaging and enhancing learning outcomes.

### 2- For teachers:

- AI in education can improve teaching and learning by setting syllabuses, identifying curriculum gaps, and enhancing human-centered approaches.
- It also helps teachers maintain student records, creates new dynamics, and drives consistent outcomes. AI provides feedback, suggests improvements, and allows teachers to develop content.
- It also allows personalized learning styles, reduces administrative work, and allows online proctoring during assessments. Teachers can supplement AI lessons, assist students, monitor progress in real-time, and maintain concentration on subjects and teaching methods.

### 3- For administration:

- AI in educational administration improves student records, recruitment, and learning management. It automates tasks like syllabus allocation, staff scheduling, substitute management, and grade management.
- AI reduces human bias, manpower costs, and operational overheads.
- It also allows for personalised course outcomes based on students' strengths and weaknesses. This technology showcases learning, critical thinking, and problem-solving, saving resources and promoting a faster, more economic decision-making process.

AI English language learning chatbots offer numerous benefits, including (Moybeka et al, 2023):

- AI chatbots and applications improve learning personalisation by detecting individual strengths, weaknesses, and learning styles, facilitating the adaptation of instructional content, difficulty levels, and periods for optimal learning.
- AI chatbots and applications aid in voice recognition and word search, enhancing pronunciation and understanding of word contexts. It also aids in writing skills development by providing instant feedback on grammar, writing style, and clarity.

- AI chatbots and applications offer flexibility in English language learning, providing uniform resources and consistent teaching, allowing students to access resources anytime, anywhere, enhancing their learning experience.
- AI chatbots and applications enable students to apply English knowledge in real-life contexts, overcoming human resource limitations by providing consistent, quality learning, and overcoming the availability of experienced teachers.

To conclude, AI chatbots improve the educational practice, the quality, and the students' interactions. It enables teachers to guide students and provide personalized education. By analyzing data and extracting patterns, AI can enhance educational outcomes and boost the student's achievement. Moreover, AI provides a personalised English learning environment in which students may use their senses to improve their English skills based on their present level, professional needs, or interests.

## **2.9 Addressing Ethical Concerns in AI Technology**

AI's capacity to encourage EFL learners raises ethical problems, such as possible overreliance, privacy of data, and algorithmic prejudice, necessitating appropriate access to AI-powered teaching tools. Research on ethical challenges in AI is divided into three categories: AI features that cause ethical issues, human aspects that cause ethical threats, and ways to instruct AI systems to be ethical (Wang & Siau, 2018).

Gayed et al. (2022) discussed ethical concerns in AI-driven language learning, such as concerns regarding privacy, algorithmic prejudice, and the role of instructors. He emphasised the significance of data privacy and informed permission, as well as tackling algorithmic bias to minimise disparities and disadvantages for certain learner groups. He also emphasised the importance of balancing the benefits of AI with human direction and social contact (Gayed et al., 2022).

To build a future inclusive society, educators should focus on enhancing students' AI abilities and interests while addressing societal impact and ethical concerns. AI technology in educational institutions should include inclusive learning activities and a guiding framework for AI policy.

## **3. Results:**

To answer the first research question, "What are the most suitable AI's applications used in English language learning (ELL)?" Studies and related literature were reviewed, and then the most important existing chatbots and applications of AI for learning the English language were mentioned, which are as follows: Mondly, Duolingo, Andy, Memrise, LingoDeer, Rosetta Stone, Babbel, Sentence Master, Speakify, TalkPal, Lingbe, and ChatGPT.

To answer the second research question, "What are the benefits of AI's applications in the field of English language learning (ELL)?" The researcher found many of these benefits, including the following: AI English language learning applications and chatbots offer numerous benefits, including personalized learning, voice recognition, and writing and reading skills development. They provide instant feedback on grammar and writing style, offer flexibility in accessing resources, and enable students to apply English knowledge in

real-life contexts. AI also helps teachers guide students and provide personalized education, enhancing educational outcomes and student achievement. By analyzing data and extracting patterns, AI provides a personalized English learning environment.

#### **4. Conclusions:**

The research's results analysis has yielded the following conclusions:

- AI's chatbot apps are powerful tools for learning languages quickly and easily, suitable for both beginners and experienced learners. They can help elevate language skills and provide a convenient way to learn new languages.
- Smart English language learning involves using smartphone apps and educational websites based on AI technologies to enhance communication with native speakers online or in real life.
- AI's smart applications in education management, EFL teaching and learning, and assessment require frequent revision to ensure up-to-date plans.
- AI chatbots enhances the students' performance, reduces the teacher's stress, prepares learners for AI use, and ensures ethical, inclusive, and equitable use for harmonious living and work.
- AI chatbots in English language learning can facilitate conversations, correct errors, and adjust students' proficiency levels.
- AI applications enhance English learning satisfaction, self-esteem, and motivation through communication, support, and student-teacher interactions.
- AI chatbots are utilized in English language learning to analyze student performance, provide personalized guidance, and develop advanced educational platforms that adapt content to students' needs, thereby improving the learning process.
- Providing possibilities for continuing education, such as training sessions, courses, or seminars, can help foreign language instructors learn about AI-powered tools and methodologies and successfully integrate them into their methods of instruction.
- Providing continuous support and guidance to foreign language instructors as they incorporate AI-powered tools can ensure their success and address any challenges they may face.
- AI can boost student motivation and enhance learning outcomes. However, it should be used alongside traditional, teacher-led education. The combination of AI and human interaction offers a comprehensive, effective learning experience for students.
- AI is increasingly being used in classrooms to improve English language proficiency by assisting with reading comprehension, vocabulary, pronunciation, grammar, vocabulary growth, speaking practice, and colloquialism comprehension, ultimately improving students' learning experiences and language engagement.



### **5. Recommendations:**

Based on the findings of the current research, the researcher presents the following recommendations:

- AI chatbots can significantly alter teacher-student relationships in classrooms, necessitating further research to understand their impact on smart learning interactions.
- Future studies on AI-based English language learning need to be well-designed, involving diverse experimental samples, and follow participants over long-term evaluations to accurately assess their effectiveness.
- English language instructors should attend professional development courses on using AI's chatbots in learning and teaching English, especially with primary grade students.
- Curriculum planners should also focus on using modern digital educational technologies, such as AI's chatbots, to develop oral performance and listening skills, as these skills are interrelated and can be improved through these methods. Moreover, The current English Language curriculum should be enriched with extra AI-based instructional activities to develop speaking skills.
- Research indicates that AI can enhance students' levels of learning English, but further studies are needed to identify the most effective AI tools and methodologies.
- Enriching the current English Language Curricula with extra instructional activities based on AI to develop speaking skills.

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