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Utilizing Artificial Intelligence (AI) Technology for English Teaching and Learning

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Abstract

Artificial intelligence, sometimes known as man-made awareness, is the electronic equivalent of human knowledge and is largely responsible for the fourth wave of modern turmoil, particularly belonging to the field of improving instructional systems. This paper aims to search critically AI advancements applied in English Language Teaching (ELT) and delve into the application of man-made intelligence in this field. The exploration method entails a thorough evaluation of suitable writing. AI plays a role in fostering an engaging learning environment that is beneficial for English language acquisition. It may adapt learning possibilities to each student's unique needs, arranging hands-on activities to strengthen English language skills and abilities according to their skill level, interests, or professional aspirations. AI facilitates instantaneous dialogue simulations that enhance written and spoken English skills. Additionally, it improves the training of students through incredible opportunities and increases the feasibility of the ELT (English Language Teaching) approach. All people can now receive ELT because of technological breakthroughs and AI platforms. Advances in AI offer opportunities to enrich expertise of English through various learning tools. Some tools, including as Google Translate, Text-to-Discourse (TTS), English Capable, Orai, Elsa, Chatbots, Duolingo, and Neo stages, function as astute frameworks suitable for replicating human-like knowledge, autonomous guidance, and cognitive processes.

Keywords: Artificial Intelligence (AI), English Language Teaching (ELT) etc.

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The advent of the modern era has limited people's ability to swiftly adapt to ongoing change. Transmitting information via various media, such as text, images, and sound, has become essential with globalization and the emergence of the fourth modern transition, which is characterized by new opportunities and challenges, particularly in innovation. In this striking sight, innovation which is thought to ease human trials and tribulations remains the cornerstone. One of the technologies experiencing intense growth is AI, which is a field of computational creativity garnering increasing attention. Various improvements in AI have been transmitted to PCs to encourage creativity. AI can be seen as the creation of software that can perform autonomous activities including computation and information retrieval and the knowledge filtering. From PC frameworks (online stages) to robotized machines (robots), man-made intelligence attempts to create "shrewd" components that mimic human cerebral utility. Furthermore, AI which indicates towards the machine's ability to replicate human-like insight is commonly referenced to as machine knowledge. In general, AI revolves around integrating human insight for task execution into machines. It is indeed true that AI is the domain associated with computer science that focuses on the investigation and creation of intelligent devices and software with the intention of endowing robots with human-like mental processes and behaviours. The essence of AI innovation is its pursuit of knowledge. AI explores and mimics intelligent behaviours exhibited by humans, animals, and machines in an effort to identify routes for achieving this goal.

"Counterfeit" and "insight" are combined to form the term "Artificial intelligence" "Artificial" describes something that is mimicked but not wholly untrue, while "intelligent" describes qualities that, under certain conditions, exceed real objects. Knowledge encompasses many different things, such as reasoning, awareness, local comprehension, planning, thinking, and creativity. AI is not about building a super intelligent computer that can find out solution to every problem; rather, the goal is to create a system that can carry out tasks that humans can. The creation of computer systems or other devices

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that exhibit notions or ideas that are generally associated with human comprehension is the aim of artificial intelligence.

The hypothesis behind machine learning (AI) is that computer systems can do tasks like understanding speech, understanding language, choice-making, and perception of visuals that require human intelligence. AI is becoming more and more important to address difficult problems like recognition and processing of natural words and to create expert systems. AI capabilities as a guide, providing tailored and consistent preparation, providing students with sufficient feedback and scaffolded exercises crucial for improving familiarity, all in a low-pressure environment where students are more likely to attempt and learn from mistakes, are all important in language education. The power of AI is in its ability to support the development of expertise.

The goal of AI is to replicate human knowledge so that humans can observe, understand, interact with, and benefit from machines. It is a branch of software engineering that focuses on mimicking human behaviour and reasoning by integrating aspects of human knowledge into well-designed PCs. AI is capable of mimicking human cognitive processes such as language comprehension, planning, decision-making, and learning. Learning English is now more effective and accessible thanks to the combination of innovation and computerized stages. AI should not entirely replace English instruction, even while its advancements call into question the function of teachers of English in homerooms. Rather, in order to adapt, AI should be integrated into the English education teaching and learning processes. The combination of computational proficiency with language instruction improves global competence.

Using AI (computer-based intelligence) in English Language Teaching, or ELT, is the approach that English language teachers use the most. English is one of the dialects that is most extensively spoken worldwide and has an organized linguistic system, therefore it is naturally challenging for understudies studying ESL/EFL (English as a Second Language/English as a Foreign Language) to learn the language. Thus, the use of AI

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techniques like neural networks, cognitive searches, and language processing algorithms can considerably contribute in the advancement of English teaching and learning. The purpose of this study is to investigate the role of AI (AI) and the numerous advancements in AI utilized in English language teaching (ELT), in accordance with the previously expressed point of view.

This analysis adopts a library-based methodology, encompassing the assortment and exploration of data from perceptive writing. In library research, bibliographic resources are intentionally examined so as to address specific research questions or concerns through a thorough analysis of relevant writing. To form a fictitious beginning point for the investigation's subject, a comprehensive study of reference books, diaries, and historical expedition finds is included in this analysis. Essentially, the examination material consists of web sources, diaries, and books related to the selected topic.

Among the most crucial areas of assessment is the interaction between English language instruction (ELT) and man-made consciousness (computer-based intelligence). AI-enabled tools are part of Computer-Assisted Language Learning (CALL), a method utilized in foreign language instruction. Large-scale dataset management technologies and improvements and analysis of natural language have resulted into significant progress in this sector. ELT is essential for enhancing students' ability to communicate globally. AI offers a plethora of improvements over traditional dialect training by leveraging the remarkable progress in natural language processing capabilities and developments in large-scale data handling.

Alis prepared to perform vital part for English language learners and teachers alike, serving as an emotional support system and assistance. AI functions like an instrument to enhance English instruction. When it comes to artificial intelligence, computerized education and language skills work well together to develop global competency, particularly in contexts where English language instruction is being provided. Personalized content delivery is a crucial constituent of digital learning technologies because adaptive systems that leverage

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gigantic information and AI algorithms are easily accessible. AI (artificial brainpower) as the solicitation of AI frameworks to improve English teaching and learning. In order to accommodate students' varying skill levels, this entails extending information sources and streams as well as improving the association, strategy, and selection of instructional content. AI is also used to simulate intelligent and expert systems, create personalized self-study protocols, and design teaching and assessment methodologies. AI changes the learning environment for acquiring English by generating a visually appealing and immersive experience.

English learning becomes more potent and sophisticated by the usage of smart devices capable of organizing and interpreting information from many foundations, including as text, audio, and images. Artificial intelligence's ability to create personalized learning environments tailored to adult students' unique needs and preferences affirms that working with it through PC interfaces improves the validity of language conditions. AI enhances the efficacy of teaching English by offering a real-time discussion simulation environment.

During this phase, students' ability to converse in English, write in English, and use English vocabulary is improved, along with their appreciation skills. Additionally, by making it easier for students to comprehend the context and culture of English-speaking nations, AI raises their interest in learning the language. Students' reasonable English skills are enhanced by AI since it allows them to interrelate with the technology and work through problems step-by-step. Educational initiatives based on AI have several advantages. These include: a. customized learning plans that are based on the unique needs and requirements of the students, meaning that every pupil is given individual consideration. b. Creating excellent teaching resources that address all language skills (listening, speaking, reading, and writing). c. Setting up helpful assistance for the two students and teachers, providing precise assistance at the accurate time and locality. d. Putting in place rapid feedback systems that, by giving pupils comprehensive performance evaluations on time, assist them in becoming more proficient language users.

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AI changes the teacher's function to one of assistant and facilitator. It might be difficult to keep the teacher at the centre of the ELT process while still serving as a director and guide. AI frameworks fundamentally change the function of the instructor in the English Language Teaching (ELT) paradigm. Instructors need to keep mentoring and helping their students. With minimal manual change, educators can effectively manage AI-powered applications. AI-related educational services are utilized as extra resources to improve English language proficiency and foster a sense of global connectedness.

Numerous options provided by AI-related instruction tools are accessible for students to take advantage of. The ability of AI to transcend temporal and spatial barriers allows reliable organizations worldwide to exchange knowledge. This equal of accessibility to educational programming based on AI is remarkable. Technologies like voice and facial recognition and movement monitoring for students, remote access are now feasible. Essentially, AI-based solutions allow for complete behaviour control over kids. English education and learning on an individual basis.

Customizing courses to each student's requirements and preferences allows for a more student-centred approach to customisation involving pupils in a learning process centred on artificial intelligence. With exercises that correspond with their interests, students can go at their own pace, revisit themes, and work on problem areas. Artificial intelligence-driven educational initiatives prioritize the development of materials that are individually designed to satisfy specific requirements, with the ultimate goal of advancing English instruction.

AI technology is considered as the sophisticated information systems in the world. This cutting-edge discipline studies how machines can perform role that was previously exclusive to humans. As technology develops and makes a variety of jobs, including teaching and learning English, easier, AI technology is often cited as a promising path in this regard. AI developments address issues such as limited viewing hours, space, resources, and repeated assessment methods in order to facilitate the teaching of foreign languages.

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Nearly every project or development in AI involves critical thinking of some kind, with computer-based intelligence encompassing dynamic critical thinking and the imitation of human mental abilities and behavioural patterns. The overall goal of AI is to create intelligent computers that can emulate human viewpoints and autonomous decision-making, much like human thought processes. Through the combination of various datasets, clever computations, and repeated processing, AI is enabled to learn from instances or salient features inherent in the data.

The topic of AI encompasses a variety of theories, methods, advancements, and subfields, such as AI, brain organization, mental registration, PC vision, and natural language processing etc. English language fragment production and interpretation presents challenges for computer systems since language communication entails complicated procedures ranging from the simple to very complex. One foremost hindrance talks from the way language has evolved as instrument of communication between intelligent animals.

English education and proficiency have been aided by the progression of computerized stages. The advancement of computer-based intelligence and man-made consciousness opens up new avenues for improving English language proficiency. The combination of computer proficiency with language instruction advances the advancement of global capabilities. Text handling is a prerequisite for language cognition in artificial intelligence, and the more advanced an AI framework is, the more remarkable its accuracy in handling linguistic complexity. Therefore, adding breakthroughs in AI to instruction in foreign languages is expected to enhance teaching and learning activities.

AI enhances the efficacy of the English language with the acquisition process and is essential to the spread of varied knowledge. Different learning advancements are made accessible to pupils, fostering their appreciation and enabling them to absorb information without having to communicate directly with teachers. With the advancement of artificial intelligence, the English language teachers and students have access to extensive assortment of language learning programs that offer them more options for improving their language

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proficiency. Examples of how man-made intelligence has advanced materials for learning the English language include several things.

One essential component of Google's comprehensive toolkit, Google Translator, is very important to users, tracking closely behind their own web crawler. You could easily access it. Text-to-discourse interpreters have essentially been replaced by Google Translator. Applications of Google, which work in tandem with Google Board, enhance the cycle of interpretation between any language and English, enabling users to continuously input on a console to complete interpretations. The five key elements of Google Translate are as follows: a. The capacity to interpret into almost 50 distinct languages. b. The capability of interpreting entire records. c. Help with word meanings and pronunciation d. The portability of the application, which enables ongoing road sign interpretation. b. Interpreting the site into other dialects. The main application for Google Translate is as an online translator for English language instruction and learning. Students use it specifically to translate words, phrases, sentences, or paragraphs between any language and English in translation exercises that are typical of Indonesian English courses. Additionally, spell-checking, this is a valuable tool for verifying English spellings and proving to be beneficial in language learning endeavours. Additionally, it can be used as an instrument for foreign language word pronunciation practice by students searching for free materials to augment their English language aptitude, particularly in learning word pronunciation.

Google As an added benefit provides an elucidation of the consolidated text-to-discourse (TTS). It highlights how various dialects are transmitted, particularly how English dialects are interpreted. The TTS contains inside When compared to various stages, Google Translate expresses speech with a more natural and fluid intonation. An apparatus that can automatically phonetize text into speech, process that involves organizing phonemes to produce speech is known as a text-to-speech (TTS) system. These frameworks can explain any word and have a large vocabulary. In the context of teaching and studying English, TTS technology facilitates the conversion of computer-generated text into spoken pronunciation

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(audio). It may save the outcome as an audio file and provides choices to change factors like speed, intonation, and output audio format. This invention streamlines natural teaching and learning process of human beings and serves as a useful apparatus for English language learners, particularly in English labs.

English ABLE, an acronym for Assessment-Based Learning Environment created especially for teaching English grammar (2007). This innovation makes use of appraisal data to guide endorsements from many foundations, such as summative and developmental assessments. An educational setting that stresses the usage of assessments to assist English language learners (ELLs) in mastering grammar is identified as English ABLE. It uses a TOEFL CBT work library to rearrange assignments that are specifically tailored to the stated competencies that ELLs are expected to possess.

English Capable provides resources to assist students in mastering many aspects of the English language as a flexible and scaffolded learning environment. Orai is a useful instrument for developing public speaking abilities because it can be made applicable as a teaching aid and as a supportive instrument for educators. Orai, praised for its user-friendliness and endearing customer experience, provides a quick, self-sufficient solution for enhancing speech talents. When it comes to identifying filler words and word usage in speech within the framework of English training, Orai excels. Teachers can use Orai to include examples in their lessons, allowing students to practice discussing topics related to their assignments.

Orai provides a variety of highlights meant to hone speaking skills, such as Illustrations, Practice, Progress, and Accounts. Each of these highlights connects with content that can be revisited at different points in order to enhance speaking abilities. ELSA (English Language Speech Assistant) improves English articulation skills through the application of discourse acknowledgment innovation and computerized reasoning (artificial intelligence). Through a two-way educational experience, customers can articulate words or sentences in this application, and the framework provides analysis and constructive critique. Since ELSA

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has been trained on voice data from speakers with varying accents, it can identify and rectify non-native speech patterns with effectiveness. In light of clients' abilities, ELSA provides clear examples that point them in the direction of more advanced articulation. ELSA is a helpful tool for English language learners and teachers who wish to enhance their conversational abilities using AI-powered discourse recognition.

The newest development in technology, chatbots is a subset of artificially intelligent conversational systems that are used to automate human-computer communication. The usefulness of chatbots as a teaching tool has been shown by numerous analyses, especially when it comes to teaching English. In the context of teaching English as a second language, a chatbot can facilitate conversations. Oral or written leadership of discussions can be developed via extensive practice. A user's daily journal and grammatical correction are crucial features for the chatbot to be successful in teaching English conversation. The punctuation error amendment identifies and highlights errors in sentence construction and offers suggestions for improvements as well as examples of the errors to help prevent botches. Furthermore, the daily log feature tracks users' advancement in learning conversational English and sentence structure while offering practice and feedback.

Word-matching and sentence completion exercises are parts of the gamified language learning process on the digital language learning platform Duolingo. This method looks for language, vocabulary, and sentence structure. When it comes to teaching and learning English, Duolingo requires students of all proficiency levels by directing first assessments to determine their English proficiency level. Duolingo adapts learning materials to the consumer's aptitudes grounded on the evaluation findings, covering language, jargon, and other etymological components. Additionally, Duolingo's gamified methodology fosters a competitive learning environment among users, enabling them to monitor their progress toward mastering the English language.

Neo, a global English language learning app by Nexgen English Online Co., offers users a customizable and effective learning environment by fusing AI and speech recognition.

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Using state-of-the-art computer-based intelligence computations, this application adapts to the user's learning progress by analyzing data and behaviour to deliver personalized content as users improve. When it comes to teaching and learning English, Neo offers customers a holistic learning experience that is similar to having a personal English teacher. Clients receive targeted instruction using highlights such as high level discourse acknowledgment to enhance their English articulation skills.

The solicitation of AI tools to English language learning offers many advantages like the capacity to assess proficiency in the language down to phonetic levels, offer instant feedback on language skill development, make language learning accessible 24/7, a particularly useful feature for individuals without internet access provide scalable learning opportunities to accommodate a larger student body, expedite learning through individualized instruction, and foster a stress-free learning environment for students who are self-conscious about their speaking abilities.

The evolution of robots with intellect on par with or even higher than that of humans is the aim of artificial intelligence. Its abilities span a variety of domains, including ordinary language processing, perception, reasoning, object control, information processing, and learning, all with the sole purpose of assisting with human endeavours. The ultimate goal is to streamline tasks in order to decrease the amount of time spent on them and increase efficiency. The advent of digital classrooms has increased accessibility to English language instruction. AI applications are becoming more accessible to a wider audience as a result of the increasing availability of computers and mobile phones. The foundation of innovative computerized learning is customized material, which is processed by flexible frameworks that make use of massive information and human intelligence. By customizing the English learning process to meet their unique needs, users can maximize their learning outcomes.

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