



The Function of Artificial Intelligence in Inclusive English Language Teaching: Strategies for Diverse Learners

Dr. M. Kannadhasan

Assistant Professor, Department of English, Thiruvalluvar University, Vellore- 632 115, Tamil Nadu, India
drmkvtu@gmail.com

Received: 22 Jun 2024, Received in revised form: 20 Jul 2024, Accepted: 27 Jul 2024, Available online: 20 Aug 2024

Abstract

Artificial Intelligence (AI) has emerged as a transformative technology with significant potential in addressing learner diversity within the realm of English Language Teaching (ELT). AI technologies, such as natural language processing, machine learning, and adaptive learning systems, can be harnessed to personalize instruction and support diverse learners. AI-powered adaptive learning systems can provide learners with varied learning paths, allowing them to progress at their own pace and focus on areas of strength and weakness. It can assist teachers in identifying areas of need and providing targeted support, freeing up instructors to focus on more complex tasks and fostering a more inclusive learning environment. The paper investigates the potential applications of artificial intelligence (AI) to enhance inclusiveness in English language training (ELT). It examines the methods and ramifications of integrating AI tools into ELT courses to improve inclusion and address student diversity. This study offers helpful advice to educators on how to design inclusive learning environments that satisfy the diverse requirements of language learners by investigating learner-centred methodologies, AI technology, and theoretical foundations. The findings demonstrate the revolutionary potential of AI in fostering personalized learning, accessibility, and diverse learning environments, all of which contribute to the advancement of inclusive ELT pedagogy.

Keywords— Learner diversity, individualized instruction, Artificial Intelligence, inclusive English language teaching, differentiated learning experiences.

In the field of English language teaching (ELT), artificial intelligence (AI) has come to light as a game-changing tool with enormous potential for addressing learner diversity. Artificial intelligence (AI) technologies comprise a broad spectrum of instruments and methodologies, including machine learning, natural language processing, and adaptive learning systems, which can be utilized to customize education and facilitate the various learning demands.

To ensure equal learning opportunities for varied learners in ELT settings, it is critical to identify the hurdles that need to be overcome before utilizing the enormous prospects for successful teaching in

education presented by artificial intelligence. Educators may create personalized, inclusive language programs that empower students from a variety of backgrounds and skill levels by utilizing AI technologies.

AI's ability to analyse vast amounts of data and generate knowledge can also help address students' diverse linguistic and cultural backgrounds. Using AI-based language analysis tools, teachers can help students from different language backgrounds identify common errors, language patterns, and differences between languages. By providing interactive simulations, virtual interactions and cross-cultural communication opportunities as part of ELT, artificial

intelligence can also help promote cultural sensitivity and intercultural competence. These AI-based programs help students experience different cultures, perspectives and authentic language use, improving their ability to function in international communication situations.

To meet the diverse demands of language learners, the understanding of the value of participatory practices in English language teaching (ELT) has increased in recent years. According to Fulcher and Davidson, inclusion means fostering an atmosphere that promotes equal access and participation for all students, regardless of their unique characteristics, abilities, cultural backgrounds, or learning preferences. The goal of equal learning opportunities is to increase student engagement and ensure learning, which are the main goals of inclusive ELT.

Inclusive ELT is important because it can meet the different demands of learners, including students with disabilities, different cultural and linguistic backgrounds and different learning environments. According to research, lack of accommodation, poor support and limited access to learning resources are just some of the difficulties that learners with disabilities face in traditional ELT environments. To enable all students to participate fully and effectively in language learning activities, participatory ELT aims to remove these barriers.

By using artificial intelligence in inclusive ELT, teachers can overcome conventional limitations and provide special support to students with disabilities. For example, hearing-impaired students can benefit from improved pronunciation and listening skills thanks to AI-based speech recognition and synthesis systems. Similarly, AI-powered adaptive learning platforms can provide personalized learning materials and pathways that suit the unique requirements of students with different language proficiency levels or learning preferences.

To ensure equal learning opportunities for different learners in ELT environments, it is important to identify the obstacles that must be overcome before starting to use the enormous opportunities offered by AI to achieve academic success. The researcher tried to point out the existing theoretical frameworks that promote inclusive education in ELT and to map various student demands that require fair and useful pedagogy. Teachers can successfully integrate AI into their technology only after recognizing the shortcomings of current pedagogy.

Tomlinson introduced differentiated education, which adapts learning to students' unique needs, interests, and readiness levels. This includes providing a variety of learning opportunities, materials and assessments in ELT that take into account different language levels, learning settings and learning styles. Teachers can maximize language learning and engagement by tailoring the learning to each student. ELT specialists assess the level of language skills of students in order to adapt the teaching accordingly. They provide features and resources that are targeted and varied to ensure accessibility and challenge. Instructional tactics include visual aids, audio resources, hands-on exercises, and technology-based tools to meet a variety of learning needs. Portfolios, projects, and group work are examples of assessment practices that emphasize student skills. Differentiated learning is a key component of effective ELT because it promotes student development, engagement and a happy learning environment.

Recognizing and meeting the many needs of language learners is essential in the vibrant and multicultural world of language learning. Each student brings unique abilities, barriers, cultural perspectives and learning styles to the classroom that enhance the learning process. It is our duty as teachers to create a welcoming and encouraging environment where the uniqueness of each student is valued. This section considers the influence of disability, cultural and linguistic background and learning styles while examining the different aspects of different requirements for language learning.

The cultural and linguistic origin of the students strongly influences the results of language learning and experiences in teaching the English language (ELT). It is important to recognize and appreciate their assets. By including cultural components, encouraging participation, and motivating students, culturally sensitive education creates an inclusive atmosphere. Supporting multilingualism improves academic performance and language skills. These techniques help ELT practitioners create an inviting and supportive environment that nurtures deep interpersonal relationships and improves language learning outcomes. Each student approaches knowledge acquisition differently, emphasizing the importance of individualized teaching for different learning preferences. Visual aids and materials that increase understanding and involvement are useful for visual learners. Audio materials, dialogues and listening help auditory learners to succeed. Role plays, manipulatives,

and sensory materials help engage and tactile learners through movement and hands-on experiences. ELT professionals build inclusive classrooms that improve engagement and language learning outcomes by combining different teaching tactics that appeal to different learning styles.

The introduction of artificial intelligence (AI) technology has created new opportunities for creative and transformative language learning experiences in the field of English Language Teaching (ELT). The introduction of individualized and adaptive learning environments has been made possible by the enormous potential and capabilities of artificial intelligence, which has revolutionized teacher education. The range of artificial intelligence techniques applied in ELT is wide and diverse, ranging from natural language processing to speech recognition, from machine learning to adaptive learning systems. This section provides an overview of these cutting-edge AI technologies and explores their applications, functions, and how they are changing language teaching.

Using speech recognition technology, computers can now translate spoken language into text, a major advance in the field of artificial intelligence (AI). In the context of English language teaching (ELT), speech recognition systems provide students with useful opportunities to perfect and develop pronunciation, fluency and listening comprehension. Speech recognition software accurately records students' spoken responses, enabling quick feedback and special pronunciation correction. For example, a language learning platform using speech recognition can assess a learner's pronunciation accuracy, determine growth areas, and provide real-time feedback on intonation, stress, and articulation. This immediate feedback encourages self-awareness in learners and helps them make necessary corrections, resulting in more accurate and confident oral communication.

Using artificial intelligence algorithms, the app provided users with personalized word challenges and recommendations based on performance and preferences. The aim of the study was to evaluate how the application affected the participants' vocabulary, text comprehension and general language skills. A group of study participants used a personalized vocabulary learning application as part of language learning. The program's AI algorithms examine performance data and student preferences to create a personalized vocabulary of exercises and suggestions for additional practice.

Activities such as word matching, contextual exercises and vocabulary were dynamic and fun.

Integrating AI-based personal vocabulary learning applications into the ELT classroom offers several advantages. First, students benefit from individualized learning that takes into account their unique vocabularies and preferences. Because the app is adaptive, it ensures that students receive the right challenges and support based on their progress. Second, the interactive and playful elements of the application increase student motivation and engagement, making vocabulary acquisition a fun and engaging experience. Last but not least, the program's data analysis capabilities provide both students and teachers with useful insights to track progress, spot areas for improvement, and make smart training decisions.

It is important to explore the transformative potential of artificial intelligence to promote inclusive English language teaching (ELT). Artificial intelligence technologies have the potential to completely transform the field of ELT by meeting the diverse learning needs of students, promoting cultural awareness, and providing individualized and differentiated learning. Regardless of a student's ability, background, or learning context, teachers can use AI algorithms and techniques to design inclusive learning environments that meet their specific needs.

One of AI's transformative contributions to inclusive ELT is its ability to improve accessibility and accommodation. By introducing functions such as text-to-speech, subtitles or sign language translation, AI-based solutions can benefit people with disabilities, such as students with visual or hearing impairments. This gives disabled students the freedom to fully participate in language learning activities and interact with the material on an equal basis with their able-bodied peers. One of the transformative aspects of AI in advancing inclusive ELT is its ability to improve accessibility and accommodation. AI-based tools can provide support to people with disabilities, such as those who are visually or hearing impaired, by providing functions such as text-to-speech, subtitles or sign language translation. This enables students with disabilities to fully participate in language learning activities and participate in content equally with their peers. In addition, the individual and differentiated education made possible by artificial intelligence supports the special learning needs and preferences of different students.

AI algorithms analyse each learner's data, including performance, progress and learning preferences, to tailor training to each student's unique needs. This personalization allows students to access the right learning resources, receive personalized feedback and move at their own pace, ultimately improving learning outcomes and engagement.

Artificial intelligence has enormous revolutionary potential to advance comprehensive ELT. Artificial intelligence technologies offer the opportunity to develop inclusive learning environments and meet the diverse demands of students through greater accessibility, cultural sensitivity, personalized education and better access to excellent education. To ensure that AI technologies are used sensibly and morally to promote inclusion, it is important to approach the integration of AI in ELT critically, taking into account ethical views and concerns.

Incorporating artificial intelligence into English Language Teaching (ELT) has shown promise in promoting inclusive practices and promoting diversity among learners. But in this situation, there is still much to learn and explore about the full potential of AI. Thus, there is a definite need to research and investigate the contribution of artificial intelligence to promote student diversity in ELT classrooms.

Creating and improving artificial intelligence models and algorithms that are specifically designed to meet the different needs of learners is one area that needs more research. It is important to ensure that AI technologies can effectively identify the unique requirements of each learner, as learner profiles and requirements can vary widely. This may require research into adaptive artificial intelligence systems that can easily adapt to different learning preferences, styles and abilities to enable personalized and inclusive education.

In addition, collaboration between researchers, educators, policy makers and industry stakeholders is critical to advancing AI to promote student diversity in ELT classrooms. It is possible to use collective knowledge and expertise to address the complexities and nuances of AI integration, fostering cross-disciplinary collaboration, exchange of best practices and discussion. Collaboration can also lead to the creation of new technologies and solutions that successfully integrate artificial intelligence technologies to create inclusive learning environments.

Further research on how AI can help increase student diversity in ELT courses is urgently needed. The

field of ELT can harness the transformative potential of AI by exploring the development of AI algorithms, evaluating the success of AI-based interventions, addressing ethical issues, and encouraging collaboration. This leads to inclusive and equitable learning experiences for all students.

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