

THE ROLE OF ARTIFICIAL INTELLIGENCE IN ENHANCING ENGLISH LANGUAGE TEACHING (ELT) THROUGH INTELLIGENT TUTORING SYSTEMS

Dr. Archana R. Watane

R. A. Arts, Shri. M. K. Commerce and Shri. S. R. Rath Science College, Washim

Abstract:

Artificial Intelligence (AI) is transforming the way English is taught and learned. Intelligent Tutoring Systems (ITS), which use AI to guide and support learners, have become important tools in English Language Teaching (ELT). These systems act like virtual tutors, giving personalized lessons, real-time feedback, and practice in grammar, vocabulary, pronunciation, and communication. They help students learn at their own pace and give teachers useful data to improve teaching. However, issues such as data privacy, cultural bias, and over-dependence on technology remain. This paper explores the benefits, challenges, and future possibilities of using AI-based ITS in English Language Teaching. It argues that when combined with human instruction, these systems can make English learning more effective, engaging, and accessible.

Keywords: Artificial Intelligence, English Language Teaching, Intelligent Tutoring Systems, English Language Learning

Introduction:

English has become a global language for education, business, science, and technology. Millions of learners across the world are trying to improve their English skills, but traditional teaching methods often cannot meet the needs of every student. Teachers face challenges such as large class sizes, limited resources, and differences in learners' abilities. Artificial Intelligence (AI) offers new ways to solve these challenges. Intelligent Tutoring Systems (ITS) are one of the most useful applications of AI in education. ITS are computer programs that act like personal tutors, adjusting lessons to the needs of each learner. This paper studies how AI based ITS are being used in English Language Teaching (ELT), their benefits, their limitations, and their future role in education.

Understanding Intelligent Tutoring Systems:

An Intelligent Tutoring System is an AI-driven learning platform that adapts to students' performance. It works in four main steps:

1. **Learner Model** – The system builds a profile of each student's strengths and weaknesses. It continuously collects information about the learner's knowledge, skills, behavior, and learning style. It also records the learner's progress over time, so the system can personalize lessons, provide targeted feedback and adjust the level of difficulty. In short, the learner model acts like a digital profile of each student's preferences and learning pace.
2. **Domain Model** – It contains knowledge about English grammar, vocabulary, pronunciation, and communication skills. The domain model serves as the content expert, ensuring that the system provides accurate and structural information. It also organizes smaller units like vocabulary themes and grammar units and defines the relationships between them. This allows the ITS to decide what

content to teach and how to explain concepts effectively to the learner.

3. **Tutoring Model** – It decides how to teach and what to teach and when to teach, much like a teacher guiding students step by step. The tutoring model acts like a virtual teacher, guiding, encouraging, correcting and personalizing the learning journey.

4. **Interface** –The interface is the communication bridge between the learner and the system. The system communicates with the learner to practice English through exercises, quizzes, or conversations. Thus the interface acts as the classroom environment where learners interact with the virtual teacher, making the whole process engaging, clear and effective.

Examples of ITS in English learning include AI chatbots like Duolingo, it uses colorful icons, short instructions and makes learning smooth and enjoyable. Speech recognition tools like Elsa Speak records a learner's voice, analyzes pronunciation, and visually shows where stress and intonation need correction, and AI writing assistants such as Grammarly. Grammarly underlines grammar mistakes in red and allows the learner to apply corrections.

Benefits of AI-Based ITS in English Language Teaching :

1. Personalized Learning experience

ITS analyze each learner's strength, weaknesses and progress. Based on this data, the system can adjust lessons to match the pace and difficulty level of each learner. For example, if a student struggles with grammar, the system gives extra exercises and explanations.

2. Real-Time Feedback

Unlike traditional classroom settings where feedback may be delayed, ITS provide instant

corrections and suggestions. This immediate response helps learners understand their mistakes and avoid repeating them.

3. Support for Teachers

AI systems do not replace human teachers but support them by handling repetitive tasks like error corrections. System collects data on student progress, which teachers can use to understand learners' needs. This allows teachers to focus on higher level tasks like motivating learners, explaining complex topics and guiding critical thinking. Teachers can plan better lessons and focus on problem areas.

4. Practice Beyond the Classroom

ITS allow students to practice English anytime, anywhere. This is useful for learners in rural or under-resourced areas where English teachers are limited.

5. Improved Motivation

AI based platforms such as Duolingo use gamification, quizzes to make learning more interactive and funny. The use of points, badges, and progress tracking, keeps learners engaged and motivated. ITS facilitate self learning by giving learners control over their pace and path. This builds learners confidence, responsibility and independence in mastering English skills.

6. Global Reach

Many AI based systems support multiple levels and accents of English, making them suitable for learners worldwide. This helps cultural barriers in language learning.

Challenges of Using ITS in ELT:

1. Lack of Human Interaction

Language learning is not only about grammar rules, vocabulary and sentence structure but also about cultural context, emotions, body language and social interaction. Teachers provide encouragement, empathy and feedback that adapt not only to the learners mistake but also their emotional state. AI cannot fully replace the role of teachers. This limitation can affect learners who depend on personal connection and live discussions to improve fluency, confidence and cultural understanding.

2. Data Privacy and Security

ITS system collect and store vast amount of personal data including personal details, performance history, learning preferences and even voice speaking. Protecting this data from misuse is a serious concern. If the data is not properly protected, it can be misused by third parties for commercial purposes. So ensure that learner's data is stored securely.

3. Cultural and Linguistic Bias

Many AI systems are developed using Western English models. This can unintentionally neglect the variations of English and cultural differences. Such as local idioms, pronunciation and cultural references may be overlooked. So the learners feel disconnected from their own linguistic identity. To overcome this issue ITS must adapt to regional needs, dialects and cultural contexts.

4. Over-Dependence on Technology

Learners may become too dependent on AI systems and lose opportunities for natural communication practice with humans. This can limit the development of essential skills like critical thinking, emotional intelligence, creativity and social interactions, which cannot be fully replicated by machines. It can also lead to reduced confidence in using language outside digital platform, especially in real world social context. To avoid this AI should be seen as a supportive tool rather than a complete replacement for teachers and human interactions.

Future of AI in ELT:

The future of AI in English Language Teaching lies in blended learning, where ITS support but do not replace teachers. AI can handle repetitive tasks like grammar correction and vocabulary drills, while teachers focus on higher-order skills such as creativity, cultural awareness, and communication. Advances in Natural Language Processing (NLP) will make ITS more capable of understanding human emotions, cultural contexts, and multilingual environments. Collaboration between educators, linguists, and AI developers will be key to making these systems fair, reliable, and accessible to all learners. They will shape the next generation of effective English language learning.

Conclusion:

AI- driven Intelligent Tutoring Systems are transforming English Language Teaching by making learning more personalized, interactive, and flexible. They provide valuable support for both students and teachers, but they cannot fully replace the human element of teaching. A balanced approach, where AI tools complement traditional methods, can create the best learning environment. By combining the precision and efficiency of AI with the empathy, creativity and cultural sensitivity of human teachers, the field of English language teaching can move towards a more holistic model of humanity. The role of AI in English Language Teaching is not to replace the teacher, but to redefine teaching and learning as a collaborative partnership between humans and intelligent machines. It ensures that the learning of English

becomes not only efficient but also deeply human and culturally meaningful. In the future, Intelligent Tutoring Systems are likely to become even more advanced and widely used, making English education more accessible across the world.

References:

1. Anderson, J. R., Corbett, A. T., Koedinger, K. R., & Pelletier, R. (1995). Cognitive Tutors: Lessons Learned. *Journal of the Learning Sciences*, 4(2), 167–207.
2. Heffernan, N. T., & Heffernan, C. L. (2014). The ASSISTments Ecosystem: Building a Platform that Brings Scientists and Teachers Together for Minimally Invasive Research on Human Learning and Teaching. *International Journal of Artificial Intelligence in Education*, 24(4), 470–497.
3. Li, J., Link, S., & Warschauer, M. (2021). Intelligent Writing Assistance for English Learners: Student Perceptions of Grammarly. *Journal of Second Language Writing*, 51, 100797.
4. Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence Unleashed: An Argument for AI in Education*. Pearson.
5. Xu, Y., & Warschauer, M. (2020). What Are You Talking About? An Analysis of Student-Computer Interaction in a Conversational AI System for English Language Learning. *Computer Assisted Language Learning*, 33(3), 208–233.