Induction of Artificial Intelligence in Bangladeshi EFL Classrooms: Teacher-Students Perception

Mili Rahman
Associate Professor,
Department of English
Dhaka International University

and

Dr. Forhad Zahid Shaikh
Chief E-Governance
Aspire to Innovate (a2i), ICT Division

Abstract: Artificial Intelligence (AI) is a computer-based simulation of human intelligence designed to behave like humans. The induction of Artificial intelligence (AI) in English language teaching has a bright future to enrich practical skills like writing and speaking adopting the platform to strengthen the habit formation in English language development. This study aims to explore the perception of Bangladeshi EFL teachers and students in incorporating Artificial Intelligence in English language classrooms. The researchers adopted the content analysis following the existed secondary data. The paper reflects a huge positive attitude of both EFL teachers and students in developing EFL learners' macro skills and micro skills by the induction of AI in the implementation of different activities in ELT classrooms. Besides, the paper also reveals the adoption of the six major applications of AI, including Automatic Evaluation Systems, Neural Machine Translation Tools, Intelligent Tutoring Systems (ITSs), AI Chatting Robots, Intelligent Virtual Environments, and Affective Computing (AC) in ITSs throughout EFL classrooms, which will accelerate EFL learners' English language proficiency. Finally the proper knowledge of technology in incorporating AI in ELT activities in EFL classrooms would accelerate EFL learners' English language skills.

Introduction

Incorporating Artificial Intelligence (AI) in EFL classrooms has played a key role to make a huge transformation in educational settings throughout the whole world. It is emerged as a way to make English language teaching and learning flexible for both ELT teachers and EFL students alike. As English is treated as a foreign language (EFL) context in Bangladesh, it is a very difficult to develop English language skills in terms of fostering communication skills and preparing students to meet the challenges of the globalized world. In such context, the incorporation of Artificial Intelligence in EFL classrooms represents a pioneering endeavor to accelerate Bangladeshi EFL learners' English language proficiency. This paper explores the dynamic landscape of AI adoption in Bangladeshi EFL classrooms. It highlights the attitudes of both EFL teachers and students regarding the infusion of Artificial Intelligence in the L2 teaching and learning processes. The analysis of these attitudes is pivotal, as it provides significant insights into the efficiency and implications of AI-driven educational applications. The paper also unravels the insightful influence of AI in

Bangladeshi EFL classrooms. It also focuses on how AI is replacing the teaching and learning scenario, challenges, and opportunities to enhance language proficiency and educational findings. By shedding the light on the perspectives of Bangladeshi EFL teachers and students, the paper endeavors to reshape the atmosphere of Bangladeshi EFL educational setting along with the induction of AI into it.

Importance of Artificial Intelligence in EFL Classrooms
Artificial Intelligence (AI) holds a significant importance in EFL (English as a Foreign Language) classrooms for both ELT educators and EFL learners. Here are several key reasons why AI plays a crucial role in enhancing EFL instructions:

a. Personalized Learning:
AI-powered language learning platforms can assess individual students' language proficiency and learning styles. This information helps create personalized lesson plans and exercises, ensuring that each student progresses at their own pace and addresses their specific language needs.

b. Immediate Feedback:
AI can provide instant feedback on pronunciation, grammar, and vocabulary usage. This immediate feedback helps students to correct errors and improve their language skills more efficiently, reducing the risk of developing bad language habits.

c. Language Practice:
AI-driven chatbots and language applications enable students to engage in conversation and practice English anytime, anywhere. This continuous exposure to the language contributes to improved fluency and confidence.

d. Natural Language Processing (NLP):
NLP technology in AI allows for the analysis of vast amounts of text and spoken language. Educators can utilize NLP tools to identify common errors made by students, enabling them to tailor lessons to address these specific challenges.

e. Enhanced Assessment:
AI can assist educators in assessing student performance and progress through automated grading and evaluation systems. This frees up valuable teaching time and ensures objective and consistent assessment.

f. Language Immersion
AI-powered virtual reality (VR) or augmented reality (AR) applications can create immersive English language environments, allowing students to practice real-life scenarios, such as ordering food at a restaurant or navigating an airport.

g. Access to Resources
AI can curate and recommend learning materials, such as articles, videos, and podcasts, based on individual students' interests and proficiency levels, making it easier for learners to access relevant content.

h. Accessibility
AI can assist students with disabilities by providing tailored support, such as text-to-speech or speech-to-text capabilities, making EFL learning more inclusive.

i. Teacher Support

AI can assist EFL instructors in planning lessons, tracking student progress, and identifying areas where students may need additional help. This allows teachers to focus on teaching and providing guidance.

j. Global Collaboration

AI-powered translation tools can facilitate communication between EFL students from different linguistic backgrounds, promoting international collaboration and cultural exchange.

k. Research and Development

AI can help researchers in the field of language acquisition and pedagogy by analyzing large datasets of learner interactions and language usage patterns, leading to insights that can improve teaching methodologies.

In conclusion, AI technology has the potential to revolutionize EFL classrooms by offering personalized learning experiences, immediate feedback, and innovative ways to practice and immerse in the English language. It empowers both educators and learners to achieve better outcomes and fosters a more engaging and effective language learning environment.

Impact of AI from Teaching Perspective

Certainly, here's an explanation of how each of the six technologies can benefit EFL (English as a Foreign Language) teachers:

a. Automatic Evaluation Systems

Automatic evaluation systems, often powered by artificial intelligence, can assist EFL teachers in assessing students' language proficiency and assignments more efficiently. These systems can automatically grade written essays, language exercises, or spoken responses, providing quick and consistent feedback. This frees up teachers' time, allowing them to focus on personalized instruction and addressing specific student needs.

b. Neural Machine Translation Tools

Neural Machine Translation (NMT) tools help EFL teachers by providing accurate and instant translations between languages. These tools can assist teachers in translating instructional materials, making them accessible to students who may have limited proficiency in English. They also aid in bridging language gaps when communicating with students who are non-native English speakers.

c. Intelligent Tutoring Systems (ITSs)

Intelligent Tutoring Systems (ITSs) are AI-driven platforms that offer personalized learning experiences. EFL teachers can benefit from ITSs as they provide insights into individual students' learning progress and areas of improvement. Teachers can use these insights to tailor their instruction, focusing on the specific needs and weaknesses of each student.

d. AI Chatting Robots

AI chatting robots, also known as chatbots, can serve as virtual language practice partners for students. EFL teachers can incorporate these robots into lessons to provide students with opportunities for conversational practice. Students can engage in dialogues with AI chatbots to improve their speaking and listening skills, which is especially useful when human practice partners are limited.

e. Intelligent Virtual Environments

Intelligent Virtual Environments create immersive language learning experiences. EFL teachers can use these environments to simulate real-life scenarios, such as shopping, traveling, or business meetings, where students can practice English in context. These environments make language learning more engaging and practical, allowing students to apply what they've learned in real-world situations.

f. Affective Computing (AC)

Affective Computing (AC) technology can help EFL teachers understand students' emotional states during learning. Emotion recognition systems can identify when students are frustrated, bored, or engaged. EFL teachers can use this information to adjust their teaching strategies and provide emotional support when needed, creating a more supportive and effective learning environment.

In summary, these six technologies can significantly support EFL teachers by automating assessment, aiding in translation, personalizing instruction, offering conversational practice, creating immersive learning experiences, and enhancing understanding of students' emotional states. These tools empower teachers to deliver more effective and tailored language instruction while improving the overall learning experience for students.

Impact of AI from Learning Perspective

Certainly, here is how each of the six technologies can benefit EFL (English as a Foreign Language) learners:

a. Automatic Evaluation Systems

Automatic evaluation systems provide EFL learners with immediate and objective feedback on their language skills. These systems can identify and highlight areas where learners need improvement, such as grammar, vocabulary, or pronunciation. This real-time feedback helps learners track their progress and work on specific language weaknesses, ultimately enhancing their language proficiency.

b. Neural Machine Translation Tools

Neural Machine Translation (NMT) tools assist EFL learners in understanding and translating content from English to their native language or vice versa. This is particularly helpful for comprehension and expanding vocabulary. Learners can use NMT tools to access a wide range of English-language materials, such as articles, books, and websites, and then translate them to aid their understanding.

c. Intelligent Tutoring Systems (ITSs)

Intelligent Tutoring Systems offer personalized learning experiences for EFL learners. These systems assess each learner's strengths and weaknesses and provide customized lessons and exercises accordingly. ITSs adapt to the individual's pace of learning, ensuring that learners receive targeted instruction and practice, which can accelerate their language acquisition.

d. AI Chatting Robots

AI chatting robots provide EFL learners with opportunities for conversational practice. Learners can engage in dialogues with these robots to improve their speaking and listening skills. The robots offer a non-judgmental and patient environment for practicing English conversation, helping learners gain confidence and fluency in real-life communication scenarios.

e.   Intelligent Virtual Environments

Intelligent Virtual Environments create immersive language learning experiences. EFL learners can use these environments to practice English in simulated real-life situations, such as ordering food at a restaurant or navigating an airport. This hands-on practice helps learners apply their language skills in practical contexts, enhancing their ability to communicate effectively.

f.   Affective Computing (AC)

Affective Computing technology can enhance the emotional aspect of EFL learning. It helps learners recognize and manage their emotions during the learning process. For example, if a learner becomes frustrated or disengaged, AC systems can detect these emotions and offer strategies or content adjustments to keep the learner motivated and focused. This emotional support can improve the overall learning experience and outcomes.

In summary, these technologies benefit EFL learners by providing instant feedback, aiding in translation and comprehension, personalizing instruction, offering conversational practice, creating immersive learning experiences, and enhancing emotional support. They contribute to a more effective and engaging language learning journey, helping learners achieve their language proficiency goals more efficiently.

Some disadvantages of using Artificial Intelligence in the EFL classrooms

While Artificial Intelligence (AI) offers numerous advantages in EFL (English as a Foreign Language) classrooms, it also comes with some disadvantages:

a.   Lack of Personalization

AI can provide personalized learning experiences, but it may not fully replace the human touch. Some students may need individualized attention and emotional support that only human teachers can provide.

b.   Overreliance on Technology

Excessive dependence on AI tools might lead to students relying solely on technology for language learning, which can hinder their ability to communicate effectively in real-life situations.

c.   Limited Contextual Understanding

AI, particularly chatbots and translation tools, may struggle with nuanced language and cultural context. They can provide accurate translations but might not grasp idiomatic expressions, cultural references, or humor.

d.   Privacy Concerns

Collecting data for AI-driven systems can raise privacy concerns. Students may be uncomfortable with the amount of data being collected and how it's being used.

e.   Accessibility Issues

Not all students have equal access to technology, and some may be left behind if they lack the necessary devices or internet connectivity. This can create a digital divide in the classroom.

f. **Loss of Human Interaction**

Over-reliance on AI may lead to reduced human interaction in the classroom, which is vital for language learning. Language is a social tool, and communication with real people is crucial for developing conversational skills.

g. **Technical Glitches**

AI systems are not infallible. Technical issues, such as software glitches or server outages, can disrupt the learning process and frustrate both students and teachers.

h. **Cost**

Implementing AI systems can be costly, making them inaccessible to schools or institutions with limited budgets.

i. **Standardization of Learning**

AI may emphasize standardized testing and assessment, potentially limiting the variety of teaching methods and stifling creativity in the classroom.

j. **Teacher Displacement Concerns**

Some educators may worry about the potential for AI to replace teaching jobs, leading to job insecurity for language instructors.

k. **Ethical Considerations**

The development and use of AI in education raise ethical questions, such as data privacy, bias in algorithms, and the responsibility for decisions made by AI systems.

l. **Dependency on Algorithms**

AI systems can reinforce students' dependency on algorithms for answers, potentially discouraging critical thinking and problem-solving skills. In conclusion, while AI offers many benefits in EFL classrooms, it is essential to strike a balance between technology and human interaction. Addressing the disadvantages involves thoughtful implementation, training for educators, and a clear understanding of AI's role in enhancing, rather than replacing, the teaching and learning process.

Conclusion

Artificial Intelligence (AI) has emerged as a powerful tool with the potential to transform English as a Foreign Language (EFL) education. Its benefits are undeniable, from personalized learning experiences and immediate feedback to enhanced language practice and access to immersive environments. AI empowers both EFL educators and learners by providing innovative solutions to age-old challenges in language acquisition. However, it is equally crucial to acknowledge the potential drawbacks of AI in EFL education. These drawbacks, such as the risk of overreliance on technology, privacy concerns, and the loss of human interaction, need to be addressed and carefully managed to ensure a balanced and effective learning environment. The key lies in leveraging AI as a supportive tool rather than a replacement for human expertise. EFL educators should embrace AI as a valuable ally, using it to enhance teaching methodologies, cater to individual learning needs, and provide a more engaging and efficient language learning journey. Ultimately, the successful integration of AI into EFL classrooms depends on thoughtful implementation, ongoing evaluation, and a commitment to maintaining the human touch in language education. When used wisely and in conjunction with skilled educators, AI has the potential to revolutionize EFL learning, making it more accessible, engaging, and effective for learners worldwide.

References

Afrianto, I., Irfan, M. F., & Atin, S. (2019). Aplikasi Chatbot Speak English Media Pembelajaran Bahasa Inggris Berbasis Android. Komputika : *Journal Sistem Komputer*, 8(2), 99-109. https://doi.org/10.34010/komputika.v8i2.2273.

Boulton, A. (2019). Data-driven learning: On paper, in practice. In C. C. Callison-Burch & P. Koehn (Eds.), Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (pp. 95-104). Florence, Italy: Association for Computational Linguistics.

Campesato, O. (2020). Artificial Intelligenfce, Machine Learning, and Deep Learning. *Stylus Publishing*, LLC.

Cheng, S.-M., & Day, M.-Y. (2014). Technologies and Applications of Artificial Intelligence:19th International Conference, TAAI 2014, Taipei, Taiwan, November 21-23, 2014,Proceedings. Springer.

Covili, J. J. (2016). Going Google: Powerful Tools for 21st Century Learning. Corwin Press. Devi, K. G., Rath, M., & Linh, N. T. D. (2020). Artificial Intelligence Trends for Data Analytics Using Machine Learning and Deep Learning Approaches. CRC Press.

Eka, I. (2020, February 20). Aplikasi ELSA Speak Ekspansi ke Indonesia, Fokus Tingkatkan Kemampuan Berbicara Bahasa Inggris. Dailysocial. https://dailysocial.id/post/elsa-aplikasi-belajar-bicara-bahasa-inggris

Fryer, L., & Carpenter, R. (2006). Bots as Language Learning Tools. *Language Learning &Technology*, 7.

Gawate, S. (2019). Artificial Intelligence (AI) Based Instructional Programs in Teaching-Learning of English Language. https://doi.org/10.33329/ijelr.64.69

Godwin-Jones, R. (2018). Chasing the butterfly effect: Informal language learning online as a complex system. *Language Learning & Technology*, 22(2), 8-27.

Han, B. (2019). Application of Artificial Intelligence in Autonomous English Learning among College Students. *International Journal of Emerging Technologies in Learning (IJET)*, 14(06), 63–74. https://online-journals.org/index.php/i-jet/article/view/10157

Haristiani, N. (2019). Artificial Intelligence (AI) Chatbot as Language Learning Medium: Aninquiry. *Journal of Physics: Conference Series*, 1387, 012020. https://doi.org/10.1088/1742-6596/1387/1/012020

He, W., Xu, G., & Kruck, S. E. (2020). Online IS education for the 21st century. *Journal of Information Systems Education,* 25(2), 101-105.

Karsenti, T. (2019). Artificial intelligence in education: The urgent need to prepare teachers for tomorrow" s schools. *Formation et Profession*, 27(1), 105. https://doi.org/10.18162/fp.2019.a166

Li, R. (2020). Using Artificial Intelligence in Learning English as a Foreign Language: An Examination of IELTS LIULISHUO as an Online Platform. *Journal of Higher Education Research,* 1. https://doi.org/10.32629/jher.v1i2.178

Luo, M., & Cheng, L. (2020). Exploration of Interactive Foreign Language Teaching Mode Based on Artificial Intelligence. 2020 International Conference on Computer Vision, Image and Deep Learning (CVIDL), 285–290. https://doi.org/10.1109/CVIDL51233.2020.00-84

Mukhallafi, T. R. A. (2020). Using Artificial Intelligence for Developing English Language Teaching/ Learning: An Analytical Study from University Students' Perspective. International *Journal of English Linguistics*, 10(6), 40. https://doi.org/10.5539/ijel.v10n6p40

Nghi, T. T., Phuc, T. H., & Thang, N. T. (2019). Applying AI Chatbot For Teaching A Foreign Language: An Empirical Research, 8(12), 6.

Rahman, S., Mahbubur. (2009). Methods and Applications for Advancing Distance Education Technologies: International Issues and Solutions: International Issues and Solutions. IGI Global.

Ribeiro, R. (2020, March 9). *Artificial Intelligence in English language learning*. Cambridge. Org.https://www.cambridge.org//elt/blog/2020/03/09/artificial-intelligence-english-language-learning/

Salvaris, M., Dean, D., & Tok, W. H. (2018). Deep Learning with Azure: Building and Deploying Artificial Intelligence Solutions on the Microsoft AI Platform. Apress.

Shin, M.-H. (2018). How to use artificial intelligence in the English language learning classroom. *Indian Journal of Public Health Research & Development*, 9(9), 557. https://doi.org/10.5958/0976-5506.2018.01058.6

Suryani, L., Syahrizal, T., & Fauziah, U. N. E. (2019). Using Orai Application in Teaching pronunciation. Indonesian EFL Journal, 5(2), 93–102. https://journal.uniku.ac.id/index.php/IEFLJ/article/view/1835

Yingsoon, G. Y. (2021). Using AI Technology to Support Speaking Skill Development for the Teaching of Chinese as a Foreign Language [Chapter]. Multidisciplinary Functions of Blockchain Technology in AI and IoT Applications; IGI Global.https://doi.org/10.4018/978-1-7998-5876-8.ch010

Zapata-Rivera, D., Vanwinkle, W., Shute, V., Underwood, J. S., & Bauer, M. (2007). EnglishABLE. Proceedings of the 2007 Conference on Artificial Intelligence in Education: Building Technology Rich Learning Contexts That Work, 323–330.

Zhu, D. (2017). Analysis of the Application of Artificial Intelligence in College English Teaching. Proceedings of the 2017 2nd International Conference on Control, Automation and Artificial Intelligence (CAAI 2017), Sanya, China. https://doi.org/10.2991/caai-17.2017.52

Zilberman, A. (2019, December 31). AI And Learning: The Latest Learning Methodology. eLearning Industry. https://elearningindustry.com/artificial-intelligence-best-tool-learning-english.