

# Teachers' Attitude towards the Use of Artificial Intelligence-based English Language Learning: A Mini Review

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## Abstract

Artificial intelligence (AI) is a computer-based human intelligence simulation meant to function like humans. AI is one of the driving forces behind the 4.0 industrial revolution in terms of facilitating education in both teaching and learning. Nevertheless, the transition from conventional teaching practices into AI-based is still tardy in the English Language Learning. Past studies revealed that AI-based teaching and learning were still argumentative. Most of the research had done on its use in education fields but there is a lack of research solely in English language field from teachers' point of view. Thus, this mini review focuses on teachers' attitude towards the use of AI-based English language learning in terms of automated grading system, learning environment, support to learners and teachers' role in AI-based environment. A literature search through published English journal articles was conducted through the databases: Web of Science, Scopus, Eric and Google Scholar and five articles were selected. Generally, the results indicated that teachers have pleasing attitude towards the use of AI-based English language learning in which it increases their work efficiency, creates an engaging environment, provides supplementary support to learners and alter teachers' role to be a facilitator in class. Thus, this review recommended that implementation of AI-based English language learning should be regarded.

**Keywords:** Teachers' Attitude, Artificial Intelligence, Machine Learning, English Language Learning, Automate

## Introduction

People are currently attempting to adapt to the fourth industrial revolution, often known as IR 4.0, which is defined succinctly as the critical interaction between humans and machines. One of the most well-known current technologies in IR4.0 is artificial intelligence, or AI, which may be defined as operating systems that can think autonomously and make intelligent judgments (Haseski, 2019; Elayyan, 2021). Artificial intelligence has been employed in the field of education as technology became more sophisticated, attracting the interest of

education scholars and practitioners. A range of technologies have been used in recent decades to increase language competency among English language learners all around the world (Rajendran & Yunus, 2021). People can use AI applications to study for ten to fifteen minutes during their own time, which is ideal for today's youth who spend a lot of time on their smartphones or tablets (Hjiri & Dormeier, 2022).

The application of artificial intelligence for normal education is still comparatively lacking, despite the fact that the integration of artificial intelligence and education has been extensively studied and practiced in the fields of basic education and higher education, and has made some progress (Liu & Bai, 2020). Artificial intelligence (AI) has brought new ways for improving teaching and learning process. However, there is a dearth of literature reviews that concentrate on the functions, effects, and implications of applying AI in the context of education (Ouyang et al., 2022). A thorough incorporation of artificial intelligence in education will become one of the most powerful forces to promote educational advancement. At the same time, the combination of conventional education with artificial intelligence offers limitless potential. Thus, there is a need to explore teachers' perceptions to the use of AI in education as the teachers are the facilitators in pupils' learning. According to the present literature, studies regarding teachers' viewpoints on artificial intelligence is extremely few. Despite the fact that there is currently a lot of material and curriculum available, we are aware of no research that specifically address teachers' viewpoints on AI in language learning, hence leave a gap. Thus, this paper aims to give insights to the teachers in Malaysia on the implementation of AI in English education.

Within the context of this research, AI-based English language learning refers to the human-like tools in teaching and learning process with teachers acting as the facilitators specifically focusing on English language learning. In this article, previous findings about teachers' view in AI usage in language learning are reviewed. As result, the theoretical construct of AI is outlined. The ethics of AI results and difficulties are briefly covered. At this time, the restricted data preclude a thorough meta-analysis of teachers' viewpoints on AI in language acquisition. To date, there have been papers on the application of AI in several education fields, but not explicitly on language acquisition, particularly English language learning. As a consequence, a targeted narrative evaluation is highlighted based on current teachers' perception outcome. Finally, the application of artificial intelligence in future language acquisition is considered.

## **Literature Review**

### **Artificial Intelligence-based Education**

AI is a computer programmes that perform human-like complicated processing tasks such as schooling, adjusting, synthesising, self-correction, and data utilisation (Fahimirad & Kotamjani, 2018). 'Machine learning,' another sort of artificial intelligence, refers to software that predicts, recognises patterns, and applies such dynamics to circumstances not covered by its fundamental design. Besides, Artificial intelligence (AI) can be view as a collection of toolkit or equipment that are widely employed in cities and campuses throughout the entire globe (Haseski, 2019). It was stated that mobile phones, the internet, search engines, various apps, and domestic electronics are among them. John McCarthy created the term in 1956, when he organised a workshop at Dartmouth College with the purpose of continuing ahead on the premise that any feature of learning or any other attribute of intelligence may be so precisely specified that a device can be developed to reproduce it (Pokrivcakova, 2019).

Artificial Intelligence (AI) use as solutions in formal schooling, specifically inside the classroom, has recently been highlighted as a potential solution to practically every "issue". Previous articles addressed the existing 'understanding' of AI application in contemporary educational institutions, which evaluates the advantages of AI applications as well as the obstacles of integrating AI into education. According to the findings, by adapting artificial intelligence into education, this would evolve the learning process becoming more personalised, increasing the effectiveness of learning experiences, assisting in discovering students' strengths, developing their creativity, and reducing teachers' burden (Haseski, 2019).

### **Artificial Intelligence-based English Language Learning**

Since English is a popular lingua franca, it has become the standard for individuals to speak in it (Lim & Yunus, 2021). Malaysia had officially announced that English as nation's second language. As a result, students in Malaysia are indirectly obliged to acquire a basic grasp of the English language (Lim & Yunus, 2021). However, most students are only exposed to English at school Wong & Yunus (2021) leading to limit chance of English language use. Thus, Pokrivcakova (2019) claimed that AI is intriguing to linguists and language teachers in more ways than one; while AI-powered technologies are used in computer linguistics to create varieties of programming languages and translations, which improve human-machine communication through voice recognition, synthesize of speech, and other means. AI-powered education (AIEd) allows for more personalised, adaptable, inclusive, and engaging learning. It able to produce an overview of what had been learned throughout the session, as well as the process of learning it and the feedback from the students. Pokrivcakova (2019) agreed that with the help of AI, the knowledges and skills developments that required by the employers can be establish with ease, besides assisting teachers to achieve in creation of more complex learning environments than would otherwise be feasible.

Gawate (2019) stated that as an additional support system, AI will play a critical function for both students and teachers of the English language. Artificial intelligence (AI) is characterised as the use of AI systems in teaching and learning English to improve the actions of organising, arranging, and choosing content. It further broadens instructional sources and schooling streams based on the learners' levels. Furthermore, AI was utilised to develop instructional methodologies and methods of evaluation by individualising self-study procedures and imitating smart and expert systems (Mukhallafi, 2020). Teachers' attitudes are affected by their experiences, and they play a significant role in establishing, consolidating, and modifying their educational views, which influence learners' learning (Reynolds, 2021). Under this setting, AI integration in schools necessitated a favourable attitude among ESL teachers in order for Malaysia's educational progress to keep pace with the current development of AI, as teaching methodologies shifted from traditional teacher-centered to student-centered (Singh & Yunus, 2021). However, there is a lack of studies of AI in English language learning field specifically teachers' attitude. A mini review was done to comprehend teachers' attitude on the use of AI in English language lesson.

### **Methodology**

Previous studies were looked for in this study as follows. To begin, the following searching parameters were applied in Web of Science to look for past studies: TS = [(“artificial intelligence” OR “AI” OR “machine learning”) AND (“teachers' perspective” OR “teachers' perception” OR “teachers' attitude” OR “teachers' belief”) AND (language learning OR

“English language learning” OR “ESL learning” OR “language education”)]. In addition, in Scopus, the following search string were used to search for the articles: TITLE-ABS-KEY ( ("teachers' perception\*" OR "teachers' belief" OR "teachers' attitude" OR "educators' perception" OR "educators' belief" OR "users' trust\*" OR "educators' attitude\*" ) AND ( "AI in education\*" OR "Artificial Intelligence education\*" OR "Artificial Intelligence learning\*" OR "AI learning\*" OR "machine learning\*" ) ). Besides, ERIC and Google Scholar were used by searching the keywords: (artificial intelligence AND English learning AND teachers' perspective). Only studies examining teachers' view in language learning setting were selected manually. These reference lists also excluded works that are not written in English. The author also ran a backward search, looking through the references of discovered studies for pertinent research studies that may have been overlooked throughout the study.

### Findings

As a consequence, the five studies listed below were discovered. Table 1 shows the features of these investigations.

Table 1

*Features of five studies included in the review.*

| Literature                  | Skill               | Teachers' Attitude | Usage  |
|-----------------------------|---------------------|--------------------|--|
| Delgado et al (2020)        | General             | Positive           | Automate grading<br>Provides supplementary support to learners<br>Create engaging learning environment<br>Alter the role of teachers |
| Lu (2019)                   | Writing Skill       | Positive           | Automate grading<br>Provides supplementary support to learners<br>Alter the role of teachers   |
| Lehlou (2021)               | Game-based learning | Positive           | Provides supplementary support to learners<br>Create engaging learning environment   |
| Aljohani (2021)             | General             | Positive           | Provides supplementary support to learners<br>Create engaging learning environment<br>Alter the role of teachers                     |
| Timpe-Laughlin et al (2020) | Speaking Skill      | Positive           | Automate grading<br>Create engaging learning environment   |

### Discussions

#### **Teachers' Attitude towards Use of Artificial Intelligence-based English Language Learning**

Previous studies have proved that most teachers had positive attitude (Delgado et al., 2020; Lu, 2019; Lehlou, 2021; Aljohani, 2021; Timpe-Laughlin et al., 2020) towards the use of AI-based English language learning. Most of the teachers found out that AI catered the needs of their profession, improve their work efficiency and easy to use, while teachers able to employ on their own initiative (Lu, 2019). It did not increase teachers' workload because AI did not

need a lot of technology (Lu, 2019). However, there were certain teachers who demonstrated dubious demeanour.

### **Artificial Intelligence Automate Grading in Educational Context**

It often consumes some time to grade homework and tests. With the aid of AI automated grading system, the extra time that was saved for professional growth, interaction with learners, and better class preparation. Teachers' testimonies emphasise the benefits of devoting extra instructional time to improve students' most critical weak areas with the existence of AI for automate grading. Most of the teachers in the studies preferred the use of AI as assessment tools for formative and diagnostic assessment purposes as it provides immediate and clear individual feedback (Lu, 2019; Timpe-Laughlin et al., 2020). Besides, with the help of AI, it reduces the frequency of marking errors in grading student's paper, thus further enhance the quality of learning. Besides grading papers more effectively, the data mining techniques of AI has the potential to provide feedback about the progress of learners, which can improve student's learning experience much efficiently (Delgado et al., 2020).

### **Artificial Intelligence Provides Supplementary Support to Learners**

The findings of this review revealed that the use of AI-based English language learning technologies are viable media alternatives to supplement instruction, particularly when it comes to adaptive learning (Delgado et al., 2020; Lehlou, 2021; Timpe-Laughlin et al., 2020). They provide students with more inclusive potentials: they improve students' learning curves by customizing instructions to their specific requirements and supporting students in becoming more responsible for their own learning (Lu, 2019; Aljohani, 2021; Timpe-Laughlin et al., 2020). Timpe-Laughlin et al (2020) also supported that stand of AI may be used as supplemental practise materials outside of the classroom because the activities are technologically sound and provide basic feedback to students.

### **Artificial Intelligence Create Engaging Learning Environment**

Recent evidence suggested that AI-based learning was being fun, motivating, engaging, personalised, flexible and authentic (Lehlou, 2021; Aljohani, 2021; Timpe-Laughlin et al., 2020) from the teachers' point of view. AI is capable of creating tasks for students that are interactive in nature and are perceived as interesting and engaging by teachers (Delgado et al., 2020). The researchers supported that AI-based learning able to adapt learners' feeling by including the social emotion of the learners in which personal questions were being added in learning path of learners. The attracting background and music yet informative created by AI will make learner more engage in learning, thus improve their learning experience.

### **Artificial Intelligence Alter the Role of Teachers**

For relatively basic course materials, AI may be trained to convey knowledge, pose questions, and seek answers. In numerous situations, AI has altered the teachers' role to a facilitator. The ability of AI to provide good virtual one-on-one tutoring in a classroom allows students to concentrate more on social and creative duties (Delgado et al., 2020; Lu, 2019). AI enables group creation by leveraging its knowledge of each individual learners to establish well-balanced groups with complementary knowledge and abilities (Delgado et al., 2020). However, there were few teachers who agreed that teachers' role diminished when the learners used artificial intelligence to learn the English language as stated in (Aljohani, 2021). Some of them had worries that AI might affect the communication between learners and

teacher when learners depend on AI completely, where in the future, the interaction between students and other human being might less effective as they are more dependent to communicate with AI.

### **Conclusion**

This review article had summarised previous findings on teachers' stand in AI-based English language learning. While there are currently insufficient results to do a meta-analysis, it is possible that teachers portrayed their interests in using AI-based English language learning, positive insight in the helpfulness and effect of using AI-based English language learning. The findings were aligned with Pokrivcakova (2019) that limited ability of a human, where unable to continuously interpret each and every learner's performance, interpret student learning desires, adjust the educational content correspondingly as well as provide learners with well-acquainted feedback. Besides, with the aids of AI-powered technologies, we can gather enormous quantities of data about each student development and use it to build up their specific learning curves as well as alter the content of learning appropriately. Furthermore, AIs improve learners' development via the use of modest consequential stages and fast feedback. As a result, teachers may employ these applications and programs as extremely useful support tools since they can spare teachers from tedious, energy- and time-consuming duties (Pokrivcakova, 2019).

With the present notion of industrial revolution 4.0, AI has become increasingly relevant to human life. AI should be integrated to educational system as it can increase the efficiency and further reduce the workload of teachers, not to mention the learning experience become much more interesting and engaging as compared to traditional teaching methods. Based on the current study, the findings revealed that teachers have positive attitude towards the implementation of AI-based English language learning which brought to the future education. The limited research findings indicate that AI implementation may bring benefits to the English teachers and learners. Thus, policies maker in our country should hasten the process of integrating the use of AI in Malaysia curriculum so that the benefits of AI can be experienced in different utilities.

### **Directions for Future Research**

The increased use of AI in education is never an excuse to overlook the complicated debate about and learning roles. The digital revolution and workforce dislocation are well known; yet, it suggests that teachers' roles in education should be revisited. AI has the potential to replace a wide range of core instructional duties. However, challenges faced by teachers had not been clearly outlined yet. For researchers, it is further recommended to examine teachers' and learners' perceptions towards the ethics of AI-based focusing on English language learning especially in Malaysia. In particular, there might be the possibility of biasness due to lack of research done. There is a need for research into the applications and progress of artificial intelligence, as well as the possibility of improving human cognition. Finally, it is vital to emphasise the new role that teachers play in modern student learning, emphasising qualities such as creativity, imagination, invention, and talents that cannot be accomplished by machines.

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