Generation Z Students' Perspectives on Artificial Intelligence (AI) Technology in English Language Learning

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ABSTRACT

Technology is advancing rapidly in this globalization era. Modern technology such as Artificial Technology (AI) emerges as the result of digitalization and it has a favourable impact on many facets of life including in education sector. Generation Z or Gen Z, as *digital natives*, utilize digital technology including AI as an essential part of their daily routines. The purpose of this study is to investigate Gen Z students' perspectives towards the use of technology particularly AI (artificial intelligence) technology in English language learning. The participants of this study were 30 students from English Education Department, class of TBI-3, fourth semester of State Islamic University of North Sumatera (UIN SU). Qualitative method was implemented in this study. To collect the data, two instruments were employed, through an interview technique and observation. The research findings revealed that 18 (60%) students *agree* with AI technology, 10 (33.3%) students were *neutral* and 2 (6.7%) students *disagree* with the utilization of AI technology in English language learning. AI technology seems to be more advanced in the future to assist human. Moreover, if it is integrated officially in education sector. Thus, Gen Z students should be wiser in accessing it. This study may broaden teachers' and lecturers' insight or horizon about current technology in English language learning.

Keywords: Artificial intelligence (AI), Gen Z, technology, English language learning, education

INTRODUCTION

Technology has been steadily growing in the last two decades and education is experiencing an increase in technology demands. The development of modern technology such as internet-based learning enables educators to implement new teaching models that view technology-based learning as more efficient, effective, fun, and engaging than traditional classroom activities. Nowadays, the language education practices with integration of technology serve to enhance various aspects of the learning process. This integration includes enabling interpersonal communication among individuals and providing them with opportunities to refine their language acquisition through platforms like websites, the internet, blogs, wikis, podcasts, and many more (Brett & González-Lloret, 2009; Dudeney & Hockly, 2007; Johnson, 2017). One technology that is currently developing rapidly in many aspects of human life including in English language learning is Artificial intelligence technology (AI) technology.

Artificial intelligence is the ability of machines to adapt to new situations, deal with emerging situations, solve problems, answer questions, device plans, and perform various other functions that require some level of intelligence typically evident in human beings (Coppin, 2004, p.4). Artificial intelligence represents the convergence of computing systems, computer-related advancements, machines, and innovations in information and communication technology, enabling computers to execute tasks that are akin to human capabilities.

Chassignol et al., (2018) offered a comprehensive delineation and explication of Artificial Intelligence (AI). AI is delineated by them as both a field of endeavor and a theoretical construct. Defined as a domain of academic inquiry, AI is characterized as a specialized area of exploration within the realm of computer science that focuses on resolving various cognitive challenges commonly linked with human intellect, such as acquisition of knowledge, resolution of complex issues, and identification of patterns, followed by the ability to adjust accordingly. Furthermore, in terms of theory, the scholars define AI as a conceptual framework that steers the advancement and utilization of computerized systems possessing human-like capabilities, particularly in the realms of cognition and execution of tasks requiring human-like intellectual acumen, encompassing functions like visual interpretation, speech understanding, decision-making, and language translation.

Artificial intelligence (AI) develops "intelligent" devices that run and react to something similar to the human brain, such as computer systems (online platforms) and computerized machines (robots) (Karsenti, 2019). Corresponding with the integration and application of new technological tools in the realm of education, artificial intelligence has been widely utilized within the educational domain. AI has extensively been applied in education, more particularly in administration and teaching, and subsequently, in influencing or impact students' learning processes. In language learning, the AI applications in education also highlighted by Pokrivcakova (2019) ; Computer-assisted language learning (CALL), which provides students or learners with customized instructions; as well as the writing and translation assistants in language learning.

Generation Z or Gen Z, as *digital natives*, utilize digital technology including AI as an essential part of their daily routines. It influences their habits and preferences including in learning. This AI technology assists Gen Z students to enhance their self-directed learning skills. As lecturers, we need to acknowledge that AI is influencing the world of young people in ways that we may not comprehend, and we should be open to hearing about their real-life experiences and perspectives. Therefore, it is pivotal to delve into their perspectives on the use of Artificial Intelligence (AI) technology in language learning, particularly in English language learning.

GEN Z AND TECHNOLOGY

Generation Z or Gen Z is a term used to describe young adults that were born from 1997 to 2012. According to many reported works, Gen Z is described as expecting an educational environment similar to their virtual world. Therefore, Gen Z is also called as the digital natives generation, a phrase coined by Prensky (2001a), which refers to the generation born in the digital age (Persada et al.2019). They expect for immediate results, feedback, and rewards and show lower levels of attention. They like visual learning , using technology to interact, quickly absorb knowledge and entertainment. Gen Z students also like interaction independence, self-paced, and collaboration in learning. Therefore, higher education teaching

should adapt to these variances in order to suit "more technology-driven, spontaneous, and multisensory" learning methods (Lai and Hong, 2015) in Alruthaya, et al., (2021).

Figure 1 below illustrates Gen Z characteristics and preferences obtained from a variety of sources. Therefore, to meet the needs and enhance their language performance, particularly in language learning, teachers need to create learning environment that is suitable to characteristics of Gen Z students. Such learning environment should include elements of technology, social media, visual forms, and entertainment. Their lives are affected by internet and its use and they cannot imagine life without it because it has become a normal part of their lives. People of this generation are less tolerant of the lack of digital tools as they use technology to access information in various areas of their lives, including education.
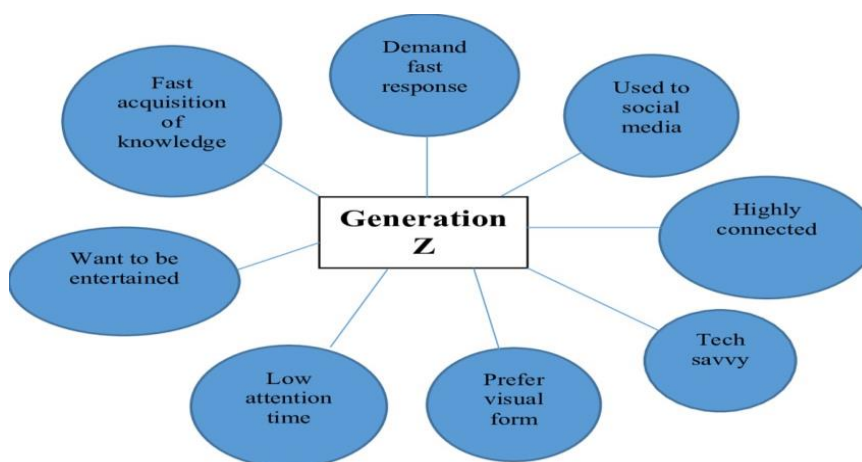

Figure 1: Gen Z Characteristics
Source: Wahab (2018)

ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE LEARNING

Daulay and Ginting (2024) stated that Artificial Intelligence (AI) has significant prospects for improving the quality of education. Artificial intelligence technology in education presents numerous mediums that teachers and students can utilize to help learning. The expansion of technological advancements and rising capital allocation indicate a probable surge in the adoption of AI-driven tools within the educational sector including in English teaching and learning. Besides, by altering the traditional way to digital, the teacher could use the time in the classroom effectively (Nissa, et al., 2023). There are some merits of using AI in English teaching and learning as Gawate (2019) highlighted that as an *additional* support system, AI will play a critical function for both students and teachers of the English language.

Radwan (2017) expounded upon the utilization of Artificial Intelligence (AI) in addressing challenges within the realm of English education. Specifically, the application of Information Retrieval methods to enhance reading comprehension abilities, the utilization of Machine Translation for the improvement of translation proficiencies, the incorporation of Automatic Speech Recognition technologies for the acquisition of accurate pronunciation, the implementation of Text-to-Speech mechanisms to aid blind and visually impaired students, the integration of open digital language dictionaries to enhance students' lexical repertoire, the

deployment of intelligent software to bolster speaking proficiencies among English learners, and the use of a writing evaluation technique for the instruction of paragraph and essay writing.

Furthermore, Gawate (2019) in Fitria (2021) denoted the benefits of AI-based English language teaching and learning instructional programs are manifold, namely:

1. These programs are characterized as user-friendly, tailored to the specific needs of consumers. The AI-based teaching software is designed to align with learners' goals and contextual requirements, thus ensuring clarity of expectations and precise criteria. It is emphasized that English language teaching and learning processes are incomplete without a thorough analysis of learners' needs.
2. Quality teaching. The utilization of Artificial Intelligence enables the development of high-quality teaching and learning materials that cater to various language aspects, including listening, speaking, reading, and writing.
3. AI serves as a supplementary support system for both teachers and students of the English language, functioning as an external mechanism for assistance. When infused with personalized knowledge, AI can provide timely and accurate support to individuals at any location and time.
4. A rapid feedback system. Artificial intelligence (AI) systems have the capability to acquire knowledge of the English language through various approaches for feedback acquisition. These systems find utility in AI-driven educational schemes for evaluating and construing information as per the academic requirements of learners, encompassing aspects like grading, reviewing, cross-referencing, and in-depth elucidation. The comprehensive evaluation of students' achievements is carried out.
5. The transformation of the teacher's role into that of a facilitator and supervisor. Altering the instructor's stance to that of a facilitator and supervisor while simultaneously maintaining the educator's involvement in the process is a complex endeavor. AI-driven systems solely adapt the role of educators within the English Language Teaching (ELT) framework. Students ought to be guided and supported by instructors. Educators can effectively oversee and administer such AI-driven initiatives with minimal manual intervention, a task that educators are capable of performing. AI-based educational provisions serve solely as a supplementary tool in the pedagogy of the English language.
6. Establishing global interconnectedness. Some AI-related instructional systems provide students with a wide range of opportunities. The resolution of spatial and temporal constraints is facilitated by Artificial Intelligence. Knowledge exchange is feasible both within and among quality organizations. This represents an extraordinary level of access to instructional software based on AI. Utilizing facial recognition, voice recognition, and student movements, remote access is enabled. In essence, AI-based applications can effectively manage all student behaviors.
7. Teaching-learning personalization in English. It is achieved by tailoring courses according to students' demands and needs. The personalization can revolve around the student, focusing on their individual requirements.
8. The AI-based learning platform enables learners to progress at their own pace, revisit topics, and highlight areas of difficulty to engage them in activities and cater to their interests. AI-based instructional programs are customized to advance English teaching and learning, emphasizing the development of need-based content.

There are some AI technologies that can be used by students in English language learning, namely:

1. **Language Translation Tool**

   Google translate machine is a familiar language translation tool that is frequently accessed online by students via https://translate.google.com. This online machine instantly translates words, phrases, simple or complex sentences or even paragraphs. This tool will automatically provide the translation version after you choose the original language and the target language. This Google's service can translate between English and over 100 other languages. Although, it translates literally, but it helps students to learn and solve their tasks. Apart from its function to translate phrases or words, this web enables students to check their English spelling accurately by clicking the speaker logo on the app. It is beneficial to check world foreign languages' pronunciations as well.

2. **Chatbot**

   A chatbot is a computer program that simulates human conversation with an end user. Not all chatbots are equipped with artificial intelligence (AI), but modern chatbots increasingly use conversational AI techniques such as natural language processing (NLP) to understand user questions and automate responses to them (https://www.ibm.com/topics/chatbots). AI chatbots can understand user's questions, no matter how they are phrased. With AI and natural language understanding (NLU) capabilities, the AI bot can quickly detect all relevant contextual information shared by the user, allowing the conversation to progress more smoothly and conversationally (https://www.ibm.com/blog/chatbot-types/). Chatbot consists of different types such from the basic one called menu or button-based chatbots, ruled-based chatbots, AI-powered chatbots, voice chatbots, generative AI chatbots. (https://www.ibm.com/blog/chatbot-types/) . In natural language conversations, this tool gives learners the opportunity to practice their English at a low pressure, comfortable environment and improve their speaking and listening skills.

3. **Grammar Checker**

   Grammar checker technologies such as Grammarly, Reverso, QuillBot AI, and so forth are getting popular for tertiary learners particularly for academic writing purpose. Microsoft Word and Google Docs have provided AI features to enhance the writing experience for students. If students feel doubt about their sentences, punctuations, or spelling, they can check them through online AI-powered grammar checker. It provides suggestions for grammar, spelling, and style improvements as students write.

4. **Duolingo**

   Duolingo is an AI-powered application that helps students in speaking and listening. It offers interactive exercises, pronunciation practice, and speaking exercises that provide immediate feedback (Handini et al., 2022). Duolingo is a well-known online application that uses a combination of interesting teaching and delightful content to learn English effectively, not only speaking and listening skills, but also reading and writing. Handini et al., (2022) asserted that in the Duolingo application, all types of abilities have been embedded to improve students' English language skills, ranging from speaking, reading, listening, and writing. Combining the best AI and language science, the lessons offer students a personalized learning at just the right level and pace. Even though AI-powered software can offer suggestions and guidance, it cannot mimic the nature of

real-life conversations or provide the same level of interaction and feedback as talking to humans.

5. **ELSA**

   ELSA is a personal AI English tutor who helps learners improve their English skills, speak more confidently and assess their fluency level, no matter their native language is. This personalized AI English learning application offers 7100+AI language learning activities to help learners speak in an American accent, learn English vocabulary and improve their pronunciation and grammar. Besides, this app can be used to train learners for the IELTS speaking test, TOEFL English test, or other English language tests. ELSA, a personalized AI English coach will listen and speak to the user like practicing with a real human. The user may start from beginner's English, or directly jump to Advanced English practice lessons, learners can select the level suit them. This AI learning application has some features, such as; Instant Speech Recognition, Accent Training, Vocabulary Enhancement, Learn English Anywhere, Bite-Sized Lessons, Speaking Proficiency Score, Tips and Advice, and Exam and Test Preparation.

6. **Paraphrasing tool**

   Paraphrasing is the process of changing words and sentences in a piece of content to make it look different from its original form but with the same meaning. "Paraphrasing is a restatement of a text or passage giving the meaning in another form, as for clearness; rewording..." (Oxford Dictionary). AI paraphraser helps students and writers to rephrase sentences, paragraphs, articles & essays. AI-based uses rule-based algorithms to provide smart and intelligent results. By making diverse changes to the text, word changer makes the content more readable than the original version. It also minimizes the chance of plagiarism. Grammarly, QuillBot, Paraphraser.io are popular examples of AI paraphrasing tools.

Apart from AI-based tools that have been mentioned above, there are still many more variety of AI tools that mushroom today to help students learn and resolve their tasks such as plagiarism checker, AI essay maker or generator, abstract maker, or generator and so on. Yet, the researcher just focuses on these six AI tools.

CHALLENGES OF USING ARTIFICIAL INTELLIGENCE TECHOLOGY IN ENGLISH LANGUAGE LEARNING

Even though AI technology has many positive applications, there are also some challenges of using it in English language learning, for instances:

1. Accuracy and Quality of AI tools. AI tools may not always provide correct or accurate responses. Selecting and ensuring the appropriate AI tools for English language learning is a crucial challenge.
2. Fake content. AI tools may have its potential misuse, such as generating fake content or deepfake videos that can be used to deceive or manipulate people. In the realm of cybersecurity, it can also pose risks when used for malicious purposes, such as generating convincing phising emails or deepfake social engineering attacks.
3. Data manipulation. AI is dependent on its training data. AI can collect students' data. If the data is modified or poisoned, or an AI-powered tool can produce unexpected or even malicious outcomes (https://www.malwarebytes.com/cybersecurity/basics/risks-of-ai-in-cyber-security).

4. Learning a language requires more than simply grammar and vocabulary, it also requires communication and interaction. It can be difficult to build teacher-student relationships when implementing AI-driven education. Language functions for a real-world language use or for human interaction. Thus, students should practice the language in the actual world, they should engage with others.

Some studies have been published regarding Artificial intelligence in English language learning, for instance, Keerthiwansha (2018), he investigated the possibilities of having AI employed in the ESL classroom to increase the student experience and productivity of the teaching process, and developed a concept as how to use AI in the Sri Lankan ESL classroom. Fitria (2021), in her research, 'The Use Technology Based on Artificial Intelligence in English Teaching and Learning' emphasized the importance of AI in English Language Teaching (ELT); it created personalized learning, it allows students to practice, and train their spoken and written skills. Huang, et al., (2021) wrote 'A Review on Artificial Intelligence in Education.' They then analysed its impact on teaching and learning, which has a positive meaning for improving teachers' teaching level and students' learning quality. Putri and Permana (2020) investigated a research entitled 'AIClopedia': How Does It Facilitate Gen-Z Students in Learning English?. This study implied that AIClopedia media can be utilized to facilitate Gen Z students in learning English. The current study about Gen Z and AI technology was carried out by Zulfikasari and Aprilianasari (2024) on their research, 'Utilization of Chat GPT Artificial Intelligence (AI) in Student's Learning Experience Gen-Z Class.'

As stated above, some studies have been conducted regarding this topic. However, this research strives to investigate Gen Z students' learning experiences and perspectives toward the use of AI in English language learning. This study is relevant to these Gen Z students since they embrace technology in their daily lives, it influences their habits and preferences including in learning. This study may broaden teachers and lecturers' horizon about current technology in English language learning employed by Gen Z and encourage educators to update their teaching media in teaching English suit to the characteristics of Gen Z learners.

METHOD

This study implemented interview and observation as the data collection method. An interview can be defined as a qualitative research technique which involves a number of participants or respondents to explore their perspective on a particular idea, phenomenon or situation. Semi-structured interview was applied to delve into participants' perspectives toward AI technology in English language learning. There were 30 students in total who were questioned by the researcher who took the role as the interviewer. The interview process was carried out in the class of TBI-3, 4th semester, State Islamic University of North Sumatera (UIN SU). One similar question was set to be answered by all interviewees (30 students). Open-ended responses were allowed. The researcher had direct control over the flow of interview process. At the same time, additional questions might be asked to clarify or further expand certain issues. Every participant was in-person interviewed in front of the class. The interviewer called the students' names one by one, then they sat in front of the author's desk and face-to-face communication occured. The researcher listened attentively to each student's response toward the similar question, "What do you think about Articial Intelligence (AI) in English language learning?" She also wrote the responses during the interview session.

Apart from an interview method, participation observations were done as well to complete the data collection. Observation was conducted during learning process and interview section. Students' behaviours, habits, and preferences in learning were observed. Their interactions with digital tools such as AI technology during task-doing session and learning process were considered too.

FINDINGS AND DISCUSSION

This study focuses on investigating Gen Z students' learning experiences toward the use of AI in English language learning. This study implemented interview and observation as the data collection method. There were 30 students who were interviewed by the researcher who took the role as the interviewer. The interview process was carried out in the class. One similar question was set to be answered by all interviewees. Semi-structured interview was applied to investigate participants' perspectives toward AI technology in English language learning. Open-ended responses were allowed.

During the interviews, the researcher wrote all the answers and analysed all responses comprehensively. The findings show that there are three types of responses, to begin with, students who *agree*, next, students who *disagree*, and finally, students who were in *neutral* position. Then, the responses were classified based on those three criteria. The following pie chart denotes Gen Z students' perspectives on Artificial Intelligence technology in English language learning:
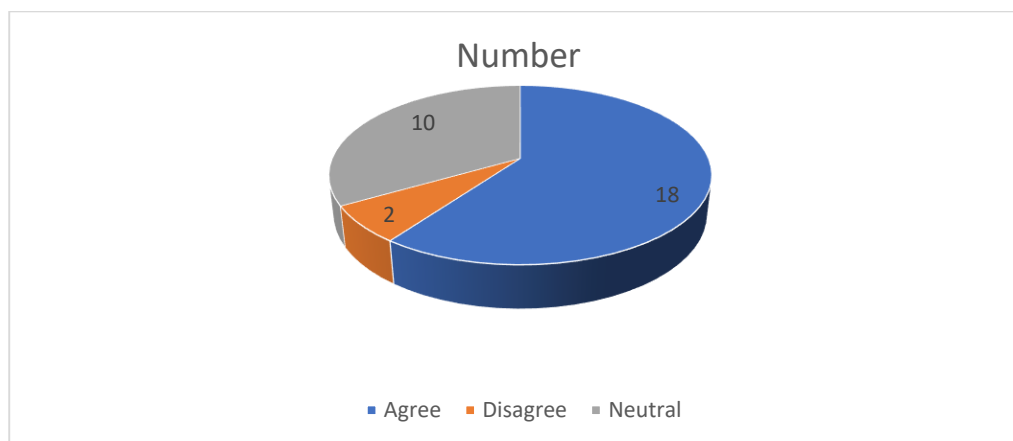
The above chart represents the total number of students namely 30 students who responded to one specific question. They received the similar question namely: "What do you think about Artificial Intelligence (AI) technology in English language learning?" They have freedom to answer the question based on their respective opinions. Based on their perspectives, the researcher concluded and classified in which category each student was; *agree*, *neutral*, or *disagree* . The findings showed that students who agree with the use of Artificial intelligence in English language learning consist of eighteen students (60%), there are ten students (33.3%) who choose to be neutral, and two students (6.7%) who totally disagree with the use of AI technology in English language learning.

Eighteen students (60%) who agree with the use of Artificial intelligence in English language learning experience argued that AI technologies are helpful for them to learn English, make them easier to do task, solve their tasks or assignments, search information, add knowledge or widen knowledge, and increase students' creativity.

Meanwhile, there are ten students (33.3%) who chose to be neutral, these students assessed how technology was used in English language learning by considering both its advantages and disadvantages. While taking into account the benefits, using technology in English language learning makes students more engaged, helps them learn more readily, improves their ability to utilize technology, and gives them quicker and easier access to a wider range of materials or information to help them completing their tasks. However, apart from the advantages, these students assumed that Artificial intelligence (AI) technology makes students lazy and dull, due to overdependency to technology, students are uncreative, students are lazy to read and comprehend the information entirely. In addition to that, the ability of students' critical thinking can decrease.

Lastly, there are two students (6.7%) who totally disagree with the use of AI technology in English language learning. The first student explained that AI technology makes students passive, and they do their tasks easily without any challenges, the second student assumed that sometimes AI technology offers invalid information, so, students should recheck the information carefully. Also, he added that AI technology makes students lazy, dull, and uncreative.

CONCLUSION

The findings conclude that AI applications influence education today including in English teaching and learning. The pursuit of newer and more innovative AI technology to assist teacher and students in English teaching and learning needs to be explored more. However, the attitude of over-reliance on technology can have some drawbacks as well. Artificial intelligence has the capability to swiftly accomplish challenging and extensive tasks, it may hinder opportunities for cognitive growth and skill development. Gen Z students should be equipped with the awareness of digital literacy too, so they will not miscommunicate or misuse important information over digital information. Furthermore, being so addictive on technology can lead to cyber fatigue, like feeling overwhelmed at adhering to a dozen digital platforms. Screen-time management should be managed too.

Government and educational institutions such as schools and universities should socialize massively the use and effect of AI technology in the future especially for adolescents, Gen Z, teachers, and lecturers as well. They are expected to be wiser and more responsible to use this AI technology. Along with it, digital-ethics regulation is crucial to be issued to address the risks of fake contents. Cyber-safety system should be improved as well to reduce the risk of data exploitation and malware attacks. Networks should be secured with firewalls, intrusion detection system, and sophisticated passwords. In addition, government, schools, and higher institutions can invest in network and application security measures like optimizing best practices of software maintenance to protect from the risk of AI. On one hand, we are encouraged to be up-to-date the current technology in this ICT (information, communication, and technology) era. On the other hand, we also require a set of regulation to manage the use of advanced AI technology in our everyday lives, in every facet of life, including in education.

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