Artificial Intelligence in English Language Learning: Exploring Personalised Learning for Generation Z

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ABSTRACT

This study delves into the transformative influence of artificial intelligence (AI) to enhance Generation Z students' English language learning. In today's digitalized setting, Gen-Z students are more accustomed to new technology, particularly AI-powered applications. The study incorporates semi-structured interviews with two language educators and two students from four different institutions in Kathmandu Valley. This study employs a qualitative interpretive research design with in-depth interviews and open-ended questions. The report also emphasises AI's potential for generating individualised learning experiences, increasing student engagement, and identifying acquaintances in real-time evaluations. However, building on Van Dijk's digital Divide theory, the study examines how unequal access to AI tools can impede equitable learning opportunities. The study examines the problems and limitations of incorporating AI tools into English language education, with an emphasis on Gen Z. Furthermore, this study examined accessibility challenges, teaching roles, and ethical concerns related to AI and its tools. Results from this study contribute to the future of English education by looking at how artificial intelligence is revolutionizing English language education for Generation Z students.

Keywords: Artificial Intelligence, Generation Z (Gen Z), English Language Learning, Personalized Learning

Introduction

Technology has advanced and has impacted education, especially in English language learning. AI is now a key tool in enhancing the learning of Gen Zs, who were born in the late 90s and early 2010s (Dimock, 2019). As digital natives, Gen Z learners are familiar with technology and online platforms, shaping how they learn (Twenge, 2017; Parker & Igielnik, 2020).

Gen Z's learning habits are deeply connected to digital tools and AI-powered platforms. This study applies Van Dijk's Digital Divide Theory to explore how Gen Z learners differ in access, skills, and usage of AI in English language education. Their early exposure to structured technologies strongly influences their learning preferences (Prensky, 2001). AI-powered technologies offer personalized and interactive educational experiences that appeal to Gen Z learners (Cazzaniga et al., 2024). Technologies like adaptive learning systems and intelligent tutors allow customized instruction, improving engagement and outcomes (Woolf, 2010). Personalized learning is essential for helping Gen Z learners succeed in language acquisition (Grant & Basye, 2014).

AI platforms offer real-time feedback, helping learners identify weaknesses and improve (Chen et al., 2020). These tools make learning more enjoyable and reduce repetitive tasks, freeing educators to focus on creative teaching (Gallarta-Sáenz et al., 2023). AI acts like a real-time tutor, adjusting to each learner's pace (Woodruff, 2024). While AI presents numerous advantages, it additionally brings questions about the role of instructors and ethical issues related to data use. This study checks the influence of AI on learning the English language for Gen Z, exploring both its advantages and potential challenges.

Aim of the Study

The study employs a qualitative study to explore how AI-driven platforms are used in English language learning among Gen Z students. Specifically, it aims to examine how AI enhances personalized learning and helps teachers provide instruction that addresses the different student needs. The study also investigates the bright and dark aspects of using AI

for both learners and educators, offering insights into its impact on present-day educational methods. This study aims to answer the question: How do AI-powered platforms enhance personalized learning experiences in English language education for Generation Z students?

Van Dijk's Digital Divide Theory and AI Integration in English Language Learning

Van Dijk's Digital Divide Theory (2006) highlighted the unequal access to technology, skills and usage access or opportunities among diverse groups. According to him digital divide operates mainly four key dimensions: the first one is motivational access, which explores the willingness or desire to use digital technologies. Second, material access expresses the availability of the use of digital technologies. The third dimension is skill access, which deals with the ability to effectively use technology, in which operational and strategic digital skills are also included. The fourth dimension is usage access, which discusses the actual application of technology in meaningful and productive ways. In the setting of English language instruction for Gen Z learners with the integration of generative AI, the digital divide theory explores key challenges like limited access to devices, unreliable internet connection and different levels of digital literacy. According to Law (2024), these biases in educational settings may create a worse impact on the realm of language learning. This may lead to an unequal learning experience, its outcomes and bias in the transformative potential of digital literacy (Mageira et al., 2022). For the betterment of Generation Z learners' inclusive and equitable education, it is essential to address these possible divides.

Literature Review

The Impact of AI in Education

AI is gradually becoming a major focus in educational research, particularly regarding its application in language learning. According to Luckin et al. (2024), by adapting learning content and necessary topics, AI can create personalized educational experiences to meet individual needs. This adaptability is crucial for effective language acquisition in the twenty-first century as learners often exhibit diverse backgrounds and learning styles. Intelligent tutoring systems have

become part of AI technologies that influence data analytics in order to track learner performance and modify instructional strategies (Reiss, 2021).

AI-driven platforms facilitate their learners, along with language educators, to shift from traditional methods of teaching to personalized learning pathways by offering supportive experiences which emphasize the engagement and performance of the learners. This adaptation can assist individuals in adjusting their difficulty levels and also offer a variety of learning materials aligning with the learner's interest.

Additionally, Generation Z is characterized by fluency in digital technology as well as a preference for interactive learning environments. In this regard, research by Doimer (2022) noted that Gen Z learners are more likely to thrive in environments where there is the availability of digital technology, interactive platforms and multimedia, therefore incorporation of technology in educational platforms is important. This indicates that meeting learners' expectations is necessary to enhance their enrolment and preferences. Furthermore, Chan and Lee (2023) also assert that educational strategies must evolve to bring into line with Gen Z's learning interests, emphasizing the need for innovative teaching approaches that utilize technology effectively. Gen Z learners often seek visually stimulating in regards with educational experiences. The emerging AI technologies, such as gamification and simulation, create engaging circumstances that maintain learners' attention and motivate them to participate actively in the task. This feature can increase engagement and is essential for language learning as it encourages consistent practice and fosters a positive attitude toward education and its necessary content. Research by Pilley (2016) emphasizes that personalized learning enhances the motivation and engagement of students, which leads to improved language proficiency and outcomes. Furthermore, the integration of adaptive technologies and AI-driven tools lifts learners' capability to achieve designed goals or gain an advantage.

AI plays a crucial part in enabling personalization by providing immediate feedback and assessments. Language learning applications, such as Duolingo,

utilize algorithms to adapt content based on user performance, consenting learners to grow at their own pace (Mageira et al., 2022). Apart from numerous benefits, AI in language learning also offers challenges and drawbacks that require careful consideration. The learners have to be aware of data privacy and the ethical implications of AI while applying AI-driven tools, this information has become increasingly pertinent. As noted by Klimova et al. (2023), the over-reliance on AI technologies in education has created a space for questions about the ownership of data and the potential for misuse. Additionally, the role of teachers is evolving, to eradicate a kind of fear that AI could replace human instruction However, Chen et al. (2024) argue that AI has to be taken as a tool that helps complement rather than replace human educators, enabling language educators to focus on higher-order teaching tasks and individualized support.

Educators and policymakers must consider data security, consent, and equity when integrating AI technologies into language instruction. The potential for bias in AI algorithms further complicates this landscape, necessitating carefully examining how AI systems are designed and how they can be implemented in a good manner should be taken care (Ntoutsi et al., 2020). Nevertheless, Future research ought to persist in investigating the effect of AI in language teaching, ensuring that it fulfils learners' different requirements responsibly and effectively to their benefit, making it necessary to carefully examine how AI systems are designed and developed.

Research Design, Data Collection, and Analysis Procedures
This study uses a qualitative approach to research to investigate the influence of AI on English language learning among Generation Z learners. The qualitative method is applied to understand the participants' understandings, attitudes, and insights regarding the integration of AI in their language learning processes. This study focuses on Generation Z students who are characterized as digital natives (Prensky, 2021) in the present era. Moreover, a narrative inquiry design was adopted to gain in-depth insights into how AI technologies shape their educational experiences and outcomes, where interviews were conducted

among Generation Z learners and educators who use AI-based tools for language learning. This strategy enabled the collection of rich, contextual data on the interaction between students, AI tools, and personalized learning environments.

Semi-structured interviews were carried out with two Generation Z learners and two language teachers who have been incorporating AI-driven tools (e.g., Duolingo, Babbel, or AI-driven classroom platforms like Google Classroom) in their teaching. Data were gathered through three rounds of thorough interviews with participants. Similarly, collected data were safely recorded on a mobile phone (Sullivan, 2012). To analyze collected data thematically, open-ended questions were asked by ensuring cross-validation with observational data. This strategy allowed for detailed exploration of their experiences and thoughts on the effectiveness of AI in language education (Barrett & Twycross, 2018). The authors engaged in interaction with participants until the objectives of the study were satisfactorily achieved.

Data was analyzed using a thematic analysis approach. All interview transcripts, including responses, were coded and categorized according to recurrent themes. From becoming acquainted with the data to coding, topic identification, and final reporting, the study proceeded following Braun and Clarke's (2006) paradigm for thematic analysis.

Findings and Discussion
The information gathered from surveys and semi-structured interviews yielded insightful findings into how Generation Z learners and language teachers perceive the application of AI in English language learning. Both groups acknowledged the benefits of AI-driven tools in enhancing personalization, engagement, and efficiency in the learning process. But there are issues with the breadth of AI feedback, and moral dilemmas, particularly around data privacy, were also raised. The gaps in the findings reveal the importance of addressing technological and pedagogical divides for equitable learning. It aligns with Van Dijk's Digital Divide Theory, which expresses the disparities in access and proper usage of GenAI. The main conclusions from these viewpoints are reflected in the topics that follow, which emphasize both the positive aspects as well as

the hazards of AI in educational settings.

The Role of AI in Personalization and Teacher Support in Language Learning

Students and teachers together underscored the impactful function of AI-powered tools in the instance of personalization while learning the language. It provides platforms to learn tough content and diverse writing tasks, such as essays and short stories, not only for learners but also for language educators (Fitria, 2023). AI is featured with systematization and an adaptive nature for individuals to learn and grasp ideas in required settings. This resonates with the study done by Mageira et al. (2022), who highlight that AI systems in language education are instrumental in adapting learning content to individual learners' needs. One of the student participants stated that

"AI platforms made me comfortable to adjust to the difficulty level based on grammatical exercises, vocabulary tests, or reading comprehension and writing conversations according to my performance. It made my task easier and helped in the progress of my learning speed as AI tools work as personal tutors. Besides, it is quick in response, and because of this feature of AI, I can correct committed mistakes myself." He added again that he favoured the way AI adjusted his lessons concerning his level and made learning feel less stressful.

Student Participant Two noted, *"It's great that I can study at my own pace, and in case I commit a mistake, AI provides me instant feedback to improve my learning. I also use AI tools to study grammar and pronunciation. It motivates me to study independently."* She pointed out that, especially varieties of resources like videos and quizzes made her learning interesting and more effective." Similarly, both of the language educators highlighted how AI tools such as Duolingo, Babbel, Chat GPT and Monica reduced their workload by offering differentiated instruction (Hashem et al., 2024). One teacher noted, *"AI does most of the work, allowing me to focus on critical areas, the work like grading assignments or providing practice exercises. These allow me to focus on areas, for example, helping students with their speaking skills."*

It lines up with Luckin et al. (2022), who suggest that AI assists in individualized learning plans and enables teachers to concentrate on higher-order educational tasks and logical perception. However, teacher participants felt that AI personalized feedback often lacked the depth of the content they were searching for. This mirrors the findings of Chan and Lee (2023), who claim that while AI excels in foundational language skills, it struggles with more complex language learning, such as nuanced sentence construction or critical thinking development. Additionally, Van Dijk's Digital Divide theory (2006) discusses differential access, skills and usage of digital tools.

AI platforms bridge the gaps by providing learning experiences and resources. Student and teacher participants emphasized that generative AI offers instant feedback and multimedia resources and promotes independent tasks. These experiences align with the motivational access of Van Dijk's notion. However, gaps in the depth of AI-generated information reflect van Dijk's usage access. Though it provides fundamental support in language learning, it is limited in addressing complex tasks like critical thinking, which highlights the need for human intervention to bridge the privilege divide.

Enhanced Engagement through Gamification

Gamification features increased student active participation and motivation in language learning. Doimer (2022) found that AI-driven platforms significantly increased the motivation of Generation Z learners to engage in activities. As one student remarked, *"I'm always trying to beat my previous score or complete more lessons to earn my pace. Activity-based learning keeps me hooked. Learning with the use of AI feels like playing, where rewards of teachers like badges and points motivate me to achieve higher goals."* Next, student participants appreciated the competitive elements, which let them learn at their own pace. She added, *"The instant feature of AI helps me quickly improve; AI builds the experience of both effective and fun learning."* This gamification feature of AI transforms language learning into a dynamic and rewarding process (Sumers et al., 2021). It motivates the learners and makes them participate in the task actively.

In addition, both of the teachers noticed that gamified AI tools encouraged students to engage more. One teacher participant commented that *"Students have changed the way they approach the language by using AI-powered tools, which supports their learning efforts as well as makes lessons more impactful and enjoyable. Learners are now performing their tasks on time. Moreover, they are nurturing language skills well."* Both of the teacher participants underscored the positive impact of gamified AI tools. They observed that the platform effectively helps learners sustain their interest and motivation towards language lessons. Research by Paschmann et al. (2024) found that gamification makes learning more immersive for digital-native students.

At the same time, some students noted that *"the gamified aspect becomes less impactful and interesting for students like us because it is time-consuming."* This echoes Chen et al. (2023), who observed that AI-driven gamification initially boosts engagement. However, the repetitive nature of such tools may reduce long-term motivation and will consume the time and effort of both the learner and educators if not continually adapted. Gamified AI tools enhance the engagement and motivation of learners and teachers simultaneously, but it is crucial to innovate updated features for long-term sustainability and address concerns about time and effort consumption.

Efficiency and Flexibility in Learning

Concerning this study, AI tools bring efficiency and flexibility to language learning for both students and teachers, these tools emphasize the validity of the application of AI technologies. One teacher remarked, *"AI tools save time, allowing me to focus on supporting students individually. These interactive tools allowed me to furnish literary tasks such as crafting essays and generating summaries easily and effectively without compromising the quality."* Another teacher shared her experience: *"AI assisted me easily in dealing with lesson planning because it provides ready-made materials like quizzes and visual aids, allowing me to prioritize a deeper connection with my learners. These advanced tools enhance learning outcomes and also create meaningful educational experiences."*

Law (2024) argued that AI reduces the administrative burden on educators and allows them to concentrate on more personalized support. Furthermore, Students also appreciated the flexibility to learn at their own pace and convenience. One student participant shared, *"I am facilitated with tools like Chat GPT and Duolingo when it is time to practice vocabulary and pronunciation and writing tasks related to literature. These tools made my learning more convenient."* These features are highlighted in the work of Mageira et al. (2022), who stated that AI applications empower learners to engage with content at their preferred times, increasing overall learning efficiency. Another student commented, *"I love that I can do lessons anytime, anywhere, even late at night or on the go without any tutor."* It made my content easy to understand, I can revisit topics as needed. However, conventional classroom interactions and peer discussions help build deeper understanding and foster creativity. The reason why it is important to balance this convenience with conventional methods."

Some students and teachers noted that while AI is prompt in feedback, it was quick and accessible too, but it lacked the depth of human interaction, particularly in writing tasks. This reflects the conclusions of Hakimi et al. (2021), who explored that AI systems often fail to deliver the detailed feedback necessary for more advanced or creative language exercises. AI-driven tools benefit from structured features, however, Van Dijk's digital divide theory highlights not everyone has equal access to this modern technology. Some teachers and students may lack the internet connection or digital skills to use it properly. Therefore, to ensure fairness in the application for equal opportunities in learning and to address possible gaps, teachers provide training and nurturing to all the learners and educators are essential.

Perceptions of Teacher Roles and Human-AI Balance

The authors found agreement among both the language educators and the learners that AI cannot replace human instructors but instead serves as a powerful complementary tool. This supports the views of Chan and Lee (2023), who argue that while AI enhances the learning experience, the emotional

and pedagogical role of teachers remains crucial. A teacher explained, *"AI assists with routine tasks, but it doesn't replace the human element in teaching, such as empathy and adaptability."* The next teacher highlighted that *"No doubt AI is a great tool for many of the content based on language education such as instant feedback on assignments, writing, and literary arts but while addressing logistical tasks, and fostering critical thinking and creativity, still we require an educator's support and personal guidance and interaction."*

It is necessary to be mindful that the teacher's role always remains pivotal to ensure meaningful learning experiences, though it has the capability of dealing with featured writing, ensuring skills and active engagement (Compton, 2009). Therefore, balancing AI tools with human intervention becomes essential for maintaining the authenticity of education in this broader landscape of technology. Similarly, students appreciated AI for its ability to give fast, crafted responses but acknowledged the importance of the involvement of human teachers for more nuanced, complex discussions over tasks and activities. One student said, *"To do coursebook exercises and text, I found AI is enhancing, but for understanding grammatical lessons and their explanation or complex writing tasks, I require my teacher's input and thorough elaboration of examples with cause and effect."*

This finding resonates with the research work of Luckin et al. (2022), who stated the irreplaceable role of human judgment in educational instruction. Besides these, ethical concerns were raised by some of the participants, particularly around data privacy, reflecting the concerns of Hakimi et al. (2021), who advocate for the ethical implications of AI systems collecting and processing student data. Educators and students voiced concerns about how their data was being used and whether it was secure or not. The language educator expressed her thoughts that he was not sure about data security and said *"I'm not sure how secure our data is, and that worries me very often."* Similar concerns underscore the need for clearer data governance in AI systems, as also suggested by Werder et al. (2022). Consequently, the establishment of transparent policies on data collection and usage is mandatory so that learners

of today's generation can trust AI and its related educational tools.

Moreover, the experiences of learners and teachers emphasized the integration of balanced AI and human resources in education. Van Dijk's digital divide theory (2005) lacks the human element of empathy and nuanced explanations, which are necessary for the growth of analytical thinking and creativity. As per the digital divide theory, having access to technology is not enough; it also demands meaningful utilization. Additionally, learners are applying AI for quick and straightforward tasks, but at the same time, they are relying on teachers for personalized guidance, and it aligns with skills access of Van Dijk's Digital Divide. It is crucial to ensure teachers' intervention for meaningful academic writing, maintaining authenticity in language education and bridging the gap in AI.

Conclusion
The findings of the study emphasized the importance of AI-assisted platforms for the enhancement of personalized learning experiences for Generation Z in English language education. These platforms enable modified content delivery, adaptive feedback mechanisms, and gamified interfaces, which collectively furnish to the diverse preferences, pace, and engagement styles of Gen Z. From the findings above, we can say that AI-powered tools are effective, particularly for nurturing learners' autonomy. It motivates language educators and learners. Along with this, these platforms help in keeping track of each learner's learning progress. However, the study also emphasizes that technology alone cannot replace the vital human elements in education. Personal interaction with teachers remains critical for emotional support, deep conceptual understanding, and the development of critical thinking skills, components that AI, in its current form, still struggles to deliver effectively. The application of Van Dijk's digital divide theory in the study focused especially on the inequities in access to digital tools, digital literacy among the learners. The absence of digital inequalities may limit knowledge it may create a biased learning environment. Thus, bridging the digital divide becomes essential not only for access but for ensuring that the benefits of personalization reach all students, regardless of their socio-economic or geographical backgrounds. Additionally, data

privacy and ethical concerns are the topmost burning challenges among Generation Z learners. Therefore, learners ought to be secure and responsible while using AI in educational settings. In conclusion, AI-powered platforms do enhance personalized learning experiences by offering flexibility, customization, and engagement, but their effectiveness depends upon equitable access, thoughtful human integration, and ongoing ethical oversight. The application of Van Dijk's theory serves as a critical lens to interpret these dynamics, reminding us that technological innovation in education must be accompanied by inclusive strategies and human-centered approaches. As this evolving world demands new technology like AI and it continues to evolve. The study also suggested that further research in these domains is essential for refining the role of AI in education and ensuring it supports both the technological and human dimensions of meaningful learning. AI-powered tools have potential benefits that may bring to the educational domain.

Recommendations

AI developers should prioritize addressing complex learning objectives, such as fostering critical thinking and enhancing creative language use. In particular, there is a need to strengthen AI-driven feedback systems, as AI tools excel in delivering personalized learning, especially for foundational language skills. Incorporating advanced natural language processing (NLP) models can provide learners with more nuanced, comprehensive feedback that supports the development of higher-order language competencies. While AI offers significant advantages for today's learners, it should be taken as a complementary tool rather than an option for human instruction. Schools, educators, and students must recognize the matchless role of human empathy, judgment, and adaptability in creating meaningful learning experiences. To guarantee the ethical and operative use of generative AI in language education, teacher training programs should be implemented. These lineups would prepare educators with the skills desirable to integrate AI tools responsibly while maintaining their vital role in guiding and supporting learners.

Furthermore, to sustain long-term learner engagement, developers should continually enhance gamification features within AI platforms, making learning both effective and enjoyable. In an increasingly digitalized world, data privacy and security remain critical ethical concerns. Developers and policymakers must establish clear, transparent data governance frameworks that protect the personal information of both learners and educators. Additionally, further studies can investigate how AI tools influence students' critical thinking and creativity in real classroom settings. More research is also needed to evaluate the effectiveness of teacher training programs designed to integrate AI into language instruction. Open communication with students, teachers, and stakeholders about data collection, usage, and protection practices is indispensable to building trust and confidence in AI-powered educational systems.

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