Generative AI in Japanese Language Education: Possibilities, Challenges, and Future from the Perspective of Thai University Teachers

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日本語教育における生成 AI の活用：タイの大学教員の視点から見たその可能性・課題・未来

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Abstract

This paper examines the significance, possibilities, and challenges of generative AI in Japanese language education from the perspective of Thai university teachers. In the discussion, the investigation was motivated by both the unexpected potential of generative AI to improve the quality of education through more efficient material creation, optimized individualized or personalized learning, and reduced burden on Japanese language teachers, as well as the growing concerns surrounding its introduction. The approach taken in this paper was to survey the types of generative AI and their current use by Japanese language teachers and learners, using previous studies as a starting point. The educational issues related to technological risks such as uncertainty and hallucination regarding information and their impact on learners' thinking and the changing role of Japanese language teachers were also discussed. The main findings showed that while generative AI offered great benefits in terms of efficiency and personalized learning, it also raised several important challenges. Challenges raised included issues of reliability of information, a potential decline in learners' critical thinking abilities, and demands for pedagogical adaptations from Japanese language teachers. The paper concluded that sustainable and symbiotic integration of AI necessitated a fundamental redesign of instructional design and proactively addressing technical, ethical, legal and social implications (ELSI) and educational challenges.

Key words: Generative AI, Japanese language teachers, Educational support, Educational issues, Transformation of Japanese language education

要旨

本稿は、タイの大学教員の視点から日本語教育における生成 AI の意義、その可能性、そして課題について考察することである。考察に際しては、教材作成の効率化、個別学習の最適化及び日本語教員の負担軽減を通じて、教育の質を向上させる生成 AI の予想もつかない可能性とその導入に伴う高まる懸念の両面に留意した。本稿のアプローチは、先行研究を手懸りとして、生成 AI の種類及び日本語教員又は日本語学習者による現在の活用事例を調査する方法を採った。また、情報に関する

不確実性やハルシネーション（hallucination）といった技術的リスク及び学習者の思考への影響や日本語教員の役割の変化等に関連する教育的課題についても議論した。主要な調査結果は、生成 AI が効率性や個別学習において大きな恩恵をもたらす一方で、幾つかの重要な課題が提起されていることが示された。課題の提起には、情報に対する信頼性の問題、学習者の批判的思考能力の潜在的な低下及び日本語教員の教育学的適応への要求も含まれる。本稿は、持続可能で共生的な AI の統合には、根本的な教育デザインの再構築と技術的、倫理的、法的（ethical, legal and social implications: ELSI）及び教育的課題の積極的な解決が必要であると結論づけた。

キーワード：生成 AI、日本語教員、教育支援、教育的課題、日本語教育の変革

1. Introduction

It is undeniable to anyone that the term AI is now frequently seen in their daily lives and that the introduction and utilization of AI is being actively promoted in all aspects of human social life. AI is an abbreviation of *Artificial Intelligence*, and AI is said to be a computer system that possesses functions similar to human intelligence, such as learning, reasoning, and judgment (NTT Docomo Business, Inc., n.d.). Through the use of AI technology, it is now possible to mechanize tasks that previously could only be done by humans. The concept underlying *artificial intelligence* in AI was first described by the British mathematician, Alan Turing in his 1950 book, and the term *artificial intelligence* was born at the Dartmouth Conference or Dartmouth Summer Research Project on Artificial Intelligence, held in 1956 (Sony group corporation, 2025). Since then, a variety of research has been conducted and continues to this day. On the other hand, since the mid-1990s, with the spread of the Internet, IT (Information technology) and Digital technologies have advanced (Cabinet Office, 2000), and e-learning platforms, online dictionaries, and digital teaching materials have been developed one after another, however, most of them only played the role of providing learning information and assisting in learning management. However, following the results of long-term research on AI, the public release of large-scale language models after late 2022, *i.e*. the emergence of generative AI, has dramatically expanded the possibilities for education and learning from simple information search and learning management tools to content generation, individual feedback, and the provision of interactive learning experiences. Generative AI is said to be better suited for more creative tasks that focus on generating new content and ideas, such as language (text), audio, images, and video (AWS, 2024), and this has started a full-blown discussion about the impact of AI and how it can be used, especially among educators. The impact of generative AI on the field of education includes 1) individually optimized learning; the possibility of adaptive learning systems and providing learning materials according to the learner's progress and level of understanding, 2) improved efficiency of teacher work (teaching and academic affairs); assistance with grading, assistance with creating learning materials, improvement of classes through data analysis, etc., and 3) acceleration of online learning; the spread of online education, etc. From my perspective as a university professor in the field of Japanese language education, he or she can see that foreign language learning apps such as *Duolingo* and general-purpose AI such as *ChatGPT* are being used in the educational field. Looking at how AI is being used within universities, teachers can see benefits such as curriculum creation support, rapid generation of a variety of teaching materials (practice questions, reading materials, etc.), more efficient evaluation and feedback, assistance in monitoring learning progress, and reduced the burden of class preparation. Students can see benefits such as individual learning support (grammar explanations, pronunciation correction, essay corrections, etc.), promotion of independent learning, access to a variety of learning content, and increased motivation to learn. Staff can see benefits such as the automation of admission and graduation procedures, support for student counseling, facility management, optimization of school operations through data analysis, and support for public relations activities. In particular, for teachers, the

use of AI can be summed up in terms of making teaching material creation more efficient, strengthening individual learning support, and reducing the workload of teachers.

In this way, there are at the stage of exploring how to use generative AI effectively through repeated trial and error, not just from the perspective of educational technology, but also from the perspective of how to use it to improve the quality of education and how to address the concerns and risks associated with it. Regarding the concerns and risks of generative AI, new issues have arisen, such as the accuracy of the information generated by AI, ethical issues, the digital divide (Ministry of Foreign Affairs of Japan, 2004), and the impact on teachers' expertise.

This paper aims to provide an overview of the current (As of July, 2025) discussion and issues surrounding the use of generative AI by Japanese-language teachers from the perspective of university-level Japanese-language education. The following Chapter 2 described the types and characteristics of generative AI, Chapter 3 provided examples of how generative AI is being used by Japanese-language teachers, Chapter 4 discussed concerns and risks in terms of education and learning, and Chapter 5 briefly mentioned the future development of generative AI in Japanese language education and Japanese language learning, based on how AI would change the quality and quantity of Japanese language education, and how learning effectiveness and learning outcomes would increase. The use of generative AI in the field of Japanese language education seems to have great potential, but it is believed that this study can provide useful discussion for creating concrete guidelines on how it should be used in the field of Japanese language education and how it can be used to improve the quality of Japanese language education.

2. Major types of generative AI and their characteristics

In Chapter 2, the types of generative AI that are expected to be utilized and their characteristics are reviewed from the perspective of Japanese language education, based on the position of university Japanese language instructors. Rather than providing technical details, the types and characteristics will provide an overview that relates to the specific applicability to education, research, and administrative work based on the use cases in Chapter 3. As mentioned above, AI *generates* text, audio, images, videos, etc., and its most distinctive feature is that it has the ability to create new ideas and content, rather than simply searching for information or analyzing information and data. At the same time, it is important to note that generative AI is merely "AI that can generate original content by applying machine learning through deep learning," and does not generate content by thinking like a human (AIsmiley Co., Ltd., 2025). Below, it will be discussed on four representative generative AIs that are currently being offered as services (AI Research Institute, 2025, Mori Contact Center, Editorial Department, 2025, RIMO Voice, 2025, & SIGNATE Research Institute, 2024).

2.1 Text generation AI (Large Language Models: LLMs)

ChatGPT (OpenAI), Claude (Anthropic), Cohere Command R+, Gemini (Google, formerly Bard), Llama, Microsoft Copilot (formerly Bing Chat), etc. are listed as *generative AI*, and they are characterized by their ability to generate natural sentences that sound like human speech and handle a wide range of text-based natural language processing tasks such as context understanding, summarization, translation, writing, question and answering, and even programming code generation. *LLM*, which has attracted worldwide attention, refers to an innovative technology in the field of natural language processing (NLP), which is built using massive amounts of text data and advanced deep learning techniques. Both *LLM* and generative AI are considered to be types of *artificial intelligence* (AI), but they have different characteristics in terms of hierarchy and areas of specialization. In other words, *LLM* is a form of generative AI specialized in natural language processing, and is defined as achieving a higher level of language understanding by learning from vast amounts of text data, while *generative AI* is defined as a general term for AI technology that can autonomously generate data such as text, images, and audio. Therefore, generative AI such as ChatGPT is an AI model that applies *LLM* and has functions that are particularly specialized for dialogue. While *LLM* can handle any language task, ChatGPT is optimized to focus

on natural conversation with users and generate appropriate responses to input (NEC Solution Innovators, Ltd., 2014-2025).

2.2 Image generation AI

Examples of image generation AI include Adobe Photoshop, DALL-E (OpenAI), Google Imagen, Midjourney, NovelAI, Stable Diffusion, starryai, and Text to Image (Canva AI). Their unique feature is that they can generate images in a variety of formats in response to text prompts. They are capable of creating a wide range of visual content, from photo-realistic images to illustrations and abstract paintings.

2.3 Voice Generated AI

Examples of voice generation AI include Coqui, Google Text-to-Speech (TTS), Amazon Polly, and ElevenLabs. Their distinctive feature is that they can generate natural, human-like voice from input text. They are capable of adjusting the voice quality (male, female, child, adult, etc.), speaking speed, emotion (joy, sadness, etc.), etc. They are also becoming more multilingual.

2.4 Video generation AI

Video generation AI is AI that generates video content based on text instructions, images, audio, etc. Examples of such AI include D-ID, Google Lumiere, HeyGen, RunwayML, Sora (OpenAI), Spirit Me, Synthesia, and Vrew. It is said to be a technology that can generate everything from short animated clips to more complex scenes and even human movements and facial expressions.

3. Examples of generative AI use by Japanese language teachers seen in previous research

3.1 Usage of generative AI by Japanese language teachers

According to a *Teacher Awareness Survey on the Use of AI in Education* (Number of Respondents: 5,823) conducted by the National Federation of Educational Policy Research Institutes in October 2024, 78.3% of teachers were interested in AI technology. In addition, 65.1% of teachers were proactive in using AI in classroom activities (AI Creation Lab Educational Research Team, 2025). According to a *pre-survey* (number of respondents: 652/number of institutions: 311) conducted prior to an online seminar held in December 2023 on the theme of *Application of ChatGPT to Japanese Language Education* for Japanese language education institutions, 54% of respondents had experience using generative AI, showing a slight majority. However, 97% of respondents said they would like to use generative AI in the future, indicating high interest (Research conference between Japanese language education institution faculty and international student education staff at higher education institutions, 2023).

At the same time, the survey also asked the question, *What purpose did you use generative AI for?* The following answers were given (multiple answers allowed), namely, creating example sentences, ideas for lesson preparation, explaining grammar, creating reading comprehension questions, creating outlines for presentations, writing letters of intent, creating syllabi, translation, teachers' own learning, essay writing guidance, talking to students and answering their questions, correcting Japanese grammar in student-written sentences, creating illustrations for slides (PowerPoint), creating picture teaching materials, creating picture cards, explaining terms, looking up the meanings of technical terms, looking up synonyms, searching literature for report writing, creating written questions and model answers, summarizing graduate school research plans and creating sample questions for oral exams, solving existing problems to create teaching material proposals, researching information on specific universities, reflecting on lessons, creating administrative documents, creating Excel functions and macro formulas, etc. (*Ibid*.). Along with the objectives for students (learners) or faculty, it was seen that the use of the generated AI spans teaching, academic, and administrative duties.

3.2 Examples of generative AI use for Japanese language learners

The use of generative AI for Japanese language learners is centered on using it to focus on the four key skills of Japanese language learning (reading, listening, writing, and speaking). Focusing on these four skills, the following examples of use were observed.

3.2.1 Reading support

In support of reading comprehension for Japanese language learners, text mining tools (such as User Local AI text mining) were used to create materials such as vocabulary lists, word frequency, part-of-speech analysis, collocation, sentiment analysis, and document summaries. It is speculated that the creation of such supplementary reading materials will enable Japanese language learners to efficiently understand the structure and meaning of sentences (Lai, 2024; Ochiai, 2020).

3.2.2 Composition support

In composition instruction, generative AI is being used to automatically generate sentences and provide ideas and concepts for compositions. In particular, the accuracy of generative AI in correcting misuse in compositions was satisfactory to 78% of Japanese language teachers (Lee *et al*., 2024), and the development of a composition support system is underway. Web applications such as *jReadability PORTAL* (a web system for learners and teachers of Japanese), developed by Jaeho Lee and his colleagues. (2017), provide functions for judging the difficulty level of composition (jReadablity) and evaluating compositions (jWriter). It is also useful for Japanese language teachers to judge the level of writing when creating teaching materials and for learners to easily look up example sentences (a database of example sentences for functional words; Hagoromo: H), including vocabulary (Japanese Educational Vocabulary: JEV) and grammatical forms (Imai *et. al*., 2024; Lee, 2024; Ochiai, 2020).

3.2.3 Support for speaking and listening

In conversation practice, the generative AI will play the role of a conversation practice partner for Japanese language learners. It can be said that learners will be able to communicate naturally in Japanese while using their speaking and listening skills. It will also be possible to practice pronunciation and accent using *chatbots* and voice recognition apps, which will reduce learners' reluctance to speak and is expected to increase their motivation to learn speaking and listening. There have been reported cases where motivation to learn speaking and listening has improved (Chen *et al*., 2025; Nakamura & Wasaki, 2023; Ochiai, 2020).

3.3 Examples of utilization by each generated AI

From the perspective of a university Japanese language instructor, it will be listed the methods and applications of each generative AI (language, image, audio, and video) with a focus on the educational aspect.

3.3.1 Language generation AI

As an application of language generation AI to individual learners, it is useful for correcting compositions and speech manuscripts written by learners. It is also useful for learning examples and usage of grammar and expressions. In terms of creating teaching materials and preparing lessons, it is useful for quickly creating teaching materials for various levels and themes. It can automatically generate reading comprehension passages, conversation scripts, and exercises (fill-in-the-blanks, rearrangements, composition assignments, etc.) tailored to specific grammar items and vocabulary, and each level of Japanese language proficiency tests such as *The Japanese-Language Proficiency Test* (JLPT) under joint organization of the Japan Foundation and Japan Educational Exchanges and Services. It can efficiently create teaching materials with adjusted difficulty levels on various themes such as Japanese culture, social issues, and current news.

3.3.2 Image generation AI

Image generation AI is a very effective tool for developing visual teaching materials. It can be used to create concrete images for vocabulary learning (*e.g*., illustrations of nouns, images of verb actions, etc.) and materials introducing Japanese culture (*e.g*., traditional events, landscapes, lifestyles, etc.). In particular, since original images can be generated without worrying about copyright, it is possible to significantly increase the diversity and visual appeal of teaching materials. In addition, by illustrating and visually presenting specific situations for conversation practice or composition assignments (*e.g*., conversations at a train station or scenes in a Japanese home), it is believed that it will deepen learners' understanding and stimulate their imagination.

3.3.3 Voice generation AI

Voice or speech generation AI can be a powerful tool to greatly expand learning opportunities through hearing. In creating listening materials, various texts such as news, conversations, and stories can be converted into natural Japanese speech, allowing for efficient generation of materials. In particular, since it is easy to prepare audio from different speakers, learners can become accustomed to various voice qualities and speaking styles, enhancing the realism of the teaching materials. In addition, voice generation AI can support learners' self-practice by providing pronunciation models. It can generate pronunciation models for specific words and sentences, which learners can use as a reference when objectively checking their own pronunciation. Furthermore, by converting texts created by students into audio, it can also be used as an aid in reading practice, allowing students to check their own pronunciation and intonation. By linking it with a large-scale language model (LLM), the voice generation AI can also serve as a partner for interactive voice conversation practice, ensuring learners have more opportunities to speak.

3.3.4 Video Generation AI

Video generation AI can develop a variety of teaching materials that appeal to the visual (images) and auditory (audio) senses. For example, it can generate short cultural introduction videos on themes such as traditional and unique Japanese culture (tea ceremony, festivals, etc.), lifestyle habits, and tourist spots, allowing learners to deepen their understanding visually and aurally. Additionally, role-playing and simulation videos that present specific settings, such as ordering at a restaurant or waiting at a hospital reception desk, are effective introductions that allow learners to imagine more practical situations and approach conversation practice. Adding character movements and facial expressions can provide a more realistic learning experience.

4. Educational issues surrounding generative AI

While the introduction of generative AI into the educational field and its use by Japanese language teachers has been recognized to have great benefits, it goes without saying that due to its nature, it is accompanied by various technical and informational issues, concerns, or risks, such as the accuracy of information and the risk of hallucination (SLiCS & Department of Teaching & Learning Support, n.d.), ethical, legal, and educational/social issues, such as lack of fairness and transparency and bias, concerns about personal information and privacy protection, and the risk of copyright infringement (Fujita, 2025; Kishimoto, 2020). These are so-called *ELSI* (Ethical, Legal and Social Issues) issues in the use of AI in education, and are interpreted as *non-technical issues* that arise in the process of putting newly developed AI technology into practical use in society. Given the current situation in which it is becoming increasingly difficult to completely reject generative AI, it can be said that fully understanding the issues and challenges involved in using generative AI and responding appropriately are essential for its sustainable use. Here, it will be focused on socially recognized educational challenges through the use of generative AI by Japanese-language teachers, including technical and information risks, as well as ethical and legal issues. Regarding the educational challenges that arise from the use of AI by Japanese-language teachers, this paper summarized the current issues from three perspectives: 1) the technical characteristics of AI (the unique characteristics of generative AI are currently creating new problems when used in educational settings); 2) the learner's learning process (while generative AI supports learning, it may also have a negative impact on the learner's internal learning process and skill development); and 3) changes in the role of Japanese-language teachers and the educational environment (the rise of generative AI is transforming the expertise of Japanese-language teachers and educational activities themselves).

4.1 Issues arising from the technical characteristics of generative AI

4.1.1. Problems of uncertainty and reliability of information

It has been pointed out that generative AI sometimes poses the risk of hallucination and copyright infringement (Fujimoto, 2023b; Lai, 2024; Online Japanese Teacher's Textbook, 2024; Tokyo Metropolitan Government Digital Services Bureau, 2024; Yoshida, 2024). The attribution of copyright for products created by

generative AI is also recognized as an unclear issue (Research Conference between Japanese Language Education Institution Faculty and International Student Education Staff at Higher Education Institutions, 2023).

4.1.2. Limitations of language understanding and the quality of teaching materials

Generative AI learns patterns based on huge amounts of data and generates responses, but it has been pointed out that it does not fundamentally understand the *meaning* of human language, a problem known as the *symbol grounding problem* (Imai *et al*., 2024; Kim, 2017). This has led to the phenomenon of people interpreting generative AI as understanding meanings and concepts in the same way as humans (Imai *et al*., 2024). In particular, it is said to be difficult to grasp advanced inferences such as human emotions and causal relationships, relationships between multiple sentences and paragraphs, cultural contexts, and subtle nuances, and there have been cases where AI alone has lost consistency in writing style and appropriate vocabulary (Amari, 2024; Kim, 2017). When AI generates sentences for beginner Japanese language learners, without proper instructions, there have been cases where the sentences contain many unstudied vocabulary and expressions and are not appropriate for the learning level (Imai *et. al*., 2024; Yoshimura, 2023). It has also been reported that when it comes to creative production, such as the creation of extensive reading materials, there is a lack of quality and mass production is difficult (Imai *et al*., 2024).

4.1.3. Constraints in speech and communication

The generative AI's ability to correct errors in writing and conversation is limited, and it may not be able to accurately point out errors that go beyond the stylistic or sentence level (Lee *et. al*., 2024). In some cases, excessive correction (*overcorrection problem*) was observed because the expressions were generated based on probability, rather than being corrected according to the learner's proficiency level, as is the case with human Japanese language teachers (Lee, 2025; Lee *et al*., 2024). Although it is possible to have free talk with generative AI, it is said that it is difficult to have flexible dialogue like a human, as it requires the ability to respond to immediate topics and for learners to actively continue the conversation (Online Japanese Teacher's Textbook, 2024). The response speed of generative AI can be too fast for learners to understand, or it can output unnatural expressions not found in textbooks, so there is a need to improve it as a self-learning tool (Nakamura & Wasaki, 2023). Above all, there are concerns that excessive reliance on generative AI may reduce opportunities for genuine interaction between learners and Japanese language teachers and other learners (Lai, 2024).

4.2. Issues regarding learners' learning process and ability development

4.2.1. Concerns about decline in thinking ability and language production ability

Because AI can easily provide answers and completed sentences, there is a risk that learners will skip the process of thinking for themselves and acquiring knowledge and skills over time (Lai, 2024; Mohri, 2024; Nakamura & Wasaki, 2023). It has been pointed out that this may lead to the loss of the essence of learning itself and the difficulty of retaining easily acquired knowledge (Lai, 2024; Mohri, 2024). As a result, learners will be less aware of their own lack of ability, raising concerns that this could lead to a decline in writing ability and critical thinking skills, as well as a lack of originality in AI-created content (Mohri, 2024).

4.2.2. Loss of motivation to learn and autonomy

It has been pointed out that excessive reliance on generative AI may lead to a decrease in motivation to learn and express things in one's own words (*Ibid*.). The use of generative AI is deeply related to issues of learner autonomy and self-control, and it is believed that if learners use generative AI simply as a *copy and paste* tool, it will not lead to improved academic ability (Fujimoto, 2023b). Many people believe that it has become more important than ever to work on learner autonomy, which encourages learners to understand their own sense of purpose of *why they learn*, and to use generative AI wisely as a complementary tool (Fujimoto, 2023b; Japanese teacher N1et, 2024).

4.2.3. Inappropriate use and difficulty in evaluation

There are concerns that the easy use of generative AI could lead to misconduct, such as students achieving high learning outcomes without putting in enough effort or submitting reports that exceed their actual abilities

(Fujimoto, 2023b; Kanamaru, 2023; Research Conference between Japanese Language Education Institution Faculty and International Student Education Staff at Higher Education Institutions, 2023; Yoshimura, 2023). However, there is no established method to determine 100% whether a text was created by a generative AI, and there is a risk that this could create suspicion among Japanese language teachers and lead to incorrect evaluations (Fujimoto, 2023a; Fujimoto, 2023b; Yoshida, 2023). In particular, it has been pointed out that report-centered evaluation methods at universities tend to lead to the widespread creation of reports on *easy themes*, which are the specialty of generative AI, and that fair evaluations become difficult when Japanese language teachers do not fully grasp students' everyday abilities (Fujimoto, 2023a; Fujimoto, 2023b).

4.3. Issues related to the role of Japanese language teachers and changes in the educational environment

4.3.1. Reconsidering the expertise and raison d'être of Japanese language teachers

As generative AI can now replace some of the traditional roles of Japanese language teachers, such as generating text, translating, correcting, and grading, it is predicted that the role of human Japanese language teachers to *teach knowledge and skills* will change or be lost (Kanamaru, 2023; Lee, 2024). Although it is emphasized that generative AI is merely a support tool, and that the expertise and creativity of Japanese language teachers themselves are the most important, there is a sense of crisis that simply teaching the AI's answers will make the expertise of Japanese language teachers unnecessary (Mohri, 2024; Nishikuma, 2025). Japanese language teachers are being forced to view generative AI as a *co-pilot* or *AI assistant function* (in the sense that AI is an assistant to humans), acquire the ability to use AI effectively, and reconstruct the meaning of their own existence by pursuing more specialized knowledge and deeper thinking skills (Mohri, 2024; Nishikuma, 2025; Yoshida, 2023).

4.3.2. Reconstructing educational design and evaluation methods

The rapid evolution of generative AI has not kept pace with research and practice in the field of education, and there is concern that existing educational designs may be invalidated (Imai *et al*., 2024; Mohri, 2024). It has been pointed out that in order to maintain fair evaluation, it is necessary to recognize that class activities, achievement goals, and learning assessment are one and the same, and to fundamentally reconsider evaluation methods (Kanamaru, 2023; Mohri, 2024). It is necessary to avoid setting tasks with *easy themes* that can be easily created by generative AI, and to rethink new tasks that can still measure learners' abilities even with the use of AI (Fujimoto, 2023b; Mohri, 2024). While the importance of performance assessment is increasing, the time and labor burden on Japanese language teachers associated with its implementation and how Japanese language teachers manage the subjectivity of scoring or grading and ensure high-quality feedback are challenges (Lee, 2025).

4.3.3. Collaboration among Japanese language teachers and the gap in AI literacy

It has been pointed out that there is a danger of creating an *AI divide* between Japanese language teachers who can use AI and those who cannot, which affects the quality of education and research efficiency. Since this sense of crisis is not yet widely shared, educational specialists and educational personnel from educational institutions and educational organizations need to take the lead in raising awareness (Imai *et al*., 2024). There are also concerns that a unified policy regarding the use of generative AI has not been fully established among teachers, and that differences in educational values could lead to conflicts between Japanese language teachers, making cooperation and collaboration difficult (Mohri, 2024). Many Japanese language teachers are unsure about their own skills in using AI, and are faced with the dilemma of not having time in their busy schedules to learn how to use AI or to instruct others on its use and applications (*Ibid*.). As a result, it is essential to promote ICT literacy education throughout educational institutions and build a system to support Japanese language teachers in incorporating AI into their teaching activities effectively and efficiently (*Ibid*.).

5. Conclusion

From the perspective of a university Japanese language instructor, several discussions on generative AI have carried out, taking into account various perspectives. Although there are some areas that have not been fully discussed, this paper has shown the possibility and future potential of generative AI in Japanese language education. Of course, appropriate responses are required to concerns and issues that arise when using generative AI, but it is expected that the use of generative AI will contribute to improving the quality and quantity of Japanese language education and learning, as well as increasing the effectiveness of education and learning. There are examples where AI is positioned as a *co-pilot*, but the relationship between generative AI and humans can be described as follows: 1) a *collaborative relationship*: a complementary relationship in which AI and humans cooperate and work together; 2) a *co-creative relationship*: a relationship in which AI and humans create new value (or innovation) and creative ideas together; 3) a *symbiotic relationship*: a relationship in which AI and humans influence and are influenced by each other, and develop together, including in social and ethical aspects; and 4) a *human augmentation relationship*: a functional relationship from the perspective of AI expanding and enhancing human capabilities. Regardless, looking at the current situation surrounding generative AI, it goes without saying that Japanese language teachers will soon be entering a stage where they will have to seriously explore ways in which generative AI can contribute to the sustainable development of Japanese language education, while keeping in mind both the positive and negative aspects of generative AI.

References

AI Creation Lab Educational Research Team. (2025, April 15). *Research Report: Current status and challenges of AI education: Latest trends in the Japanese educational field and future prospects*. Tokyo AI Creation Studio. https://tokyo-ai-classschool.com/blog/ai-education-current-state

AI Research Institute. (2025, June 14). What are the 4 types of generative AI? Here are 10 popular services for each. *Generation AI*. AlgoX, Inc. https://metaversesouken.com/ai/generative_ai/types/

AIsmiley Co., Ltd. (2025, May 30). What is generative AI? Explaining how to use it, its types, how it works, and examples of its use. *AI Portal Media*. https://aismiley.co.jp/ai_news/what-is-generative-ai/

Amari, Mino. (2024). Research on the development of multi-level extensive reading materials for modern Japanese literature through collaboration between Japanese language education experts and AI: A new collaborative approach using idea units. *Proceedings of the 2024 Association for Japanese Language Education Fall Conference*, pp. 113-118.

Amazon Web Services [AWS]. (2024). *What is generative AI?* https://aws.amazon.com/jp/what-is/artificial-intelligence/

Cabinet Office, Government of Japan. (2000). Chapter 1 Section 6, IT (Information and Communication Technology) and the World economy, *Annual World Economic Report 2000*. https://www5.cao.go.jp/j-j/wp-we/wp-we00/sekaihakusho-00-maegaki.html

Chen, Hsiang, Adachi Marie, & Yamashita, Kazuhiro. (2025). How to use AI for Japanese language teachers. *Bulletin of Japan International University, Vol.1 2025*, pp. 13-21.

Fujimoto, Kaoru. (2023a). Let's think about generated AI (chatGPT). *The 18th ACRAS [Acras Japanese Language Education Institute] ZOOM Terakoya "Announcement & Implementation Report"* https://acrasweb.jp/?p=481

_____. (2023b). How will Japanese language teachers deal with generative AI? *Research Conference between Japanese Language Institution Faculty and International Student Education Officers at Higher Education Institutions*. Japan Student Services Organization [JASSO]. https://www.jasso.go.jp/ryugaku/jlec/tjlec/research/study_meeting_report.html

Fujita, Takanori. (2025). *ELSI (ethical, legal, and social issues) and future prospects for using generative AI in Education*. The Tokyo Foundation. https://www.tkfd.or.jp/research/detail.php?id=4664

Imai, Shingo, Yoshikawa, Toru, & Li, Wenxin. (2024). Generative AI brings about a paradigm shift in Japanese language education and research. *Proceedings of the 2024 Association for Japanese Language Education Fall Conference*, pp. 31-39.

Japanese teacher N1et. (2024). *How to use generative AI in Japanese language education*. https://jn1et.com/generative_ai/

Kanamaru, Toshiyuki. (2023). What will language generation AI bring to foreign language education? *JUCE [Japan Universities Association for Computer Education] journal 2023, Vol. 183,* No.2, pp. 16-17.

Kim, Hyogyung. (2017). Summary of the special program at the spring 2017 conference: Linking people and building society; Developing the contemporary possibilities for Japanese language education; and Dialogue with artificial intelligence. *Japanese Language Education, No. 168*, pp. 28-39.

Kishimoto Atsuo. (2020). *What is ELSI?* The University of Osaka Research Center on Ethical, Legal and Social Issues. https://elsi.osaka-u.ac.jp/

Lai, Jiin-chiueh. (2024). The Pros and cons of language generation AI in Japanese language education. *Journal of Japanese Language Education in Taiwan, No. 43*, Association of Japanese Language Education in Taiwan, pp. 108-135.

Lee, Jaeho. (2024). The impact of ChatGPT and the future direction of foreign language education. *JACET [The Japan Association of College English Teachers] Chugoku-Shikoku Chapter Research Bulletin, Volume 21,* March 2024, pp. 31-44.

_____. (2025). Japanese language education and generative AI: An example of using ChatGPT as a support tool for performance evaluation. *84th Cyber Symposium on Online Education and Digital Transformation in Universities and Other Institutions "DX Symposium for Educational Institutions" (Held online on January 14th)*. National Institute of Informatics. https://www.nii.ac.jp/event/upload/20250114-3_ri.pdf

Lee, Jaeho, Iwasaki, Takuya, Murata, Yumiko, & Srdanović, Irena. (2024). To what extent are Japanese language teachers satisfied with generative AI's misuse corrections? Efforts to develop generative AI into a competent corrector. *Proceedings of the 2024 Association for Japanese Language Education Fall Conference*, pp. 77-82.

Lee, Jaeho, Sunakawa, Yuriko, Hori, Keiko, & Hasebe, Yoichiro. (2017). *jReadability PORTAL. Web system for Japanese language learners and teachers* (jReadability, jWriter, JEV, Hagoromo). https://jreadability.net/

Ministry of Foreign Affairs of Japan. (2004). Digital divide, *IT (Information and Communication Technology)*. https://www.mofa.go.jp/mofaj/gaiko/it/dd.html

Mohri, Takami. (2024). Japanese Language Teachers' conflicts regarding the use of AI by learners. *Proceedings of the 2024 Japanese Language Education Society Fall Conference*, pp. 222-227.

Mori Contact Center, Editorial Department. (2025, March 4). [List included] Introducing generative AI services by type [Latest version 2024]. *Generative AI (blog)*. https://www.cloud-contactcenter.jp/blog/introducing-generation-ai-services-by-type.html

Nakamura, Shizuka, & Wasaki Katsumi. (2023). Practical examples of Japanese language teaching using generative AI scripts and utterance. *JSiSE Research Report, Vol. 38,* No. 3 (Japanese Society for Information and Systems in Education), pp. 84-90. https://www.jsise.org/society/committee/2023/3rd/TR-038-03-14.pdf

NEC Solution Innovators, Ltd. (2025, February 29). What is LLM (Large-Scale Language Model)? Explaining the difference with generative AI and how it works. *Innovator's VOICE (Business Column Top)*. NEC Solution Innovators. https://www.nec-solutioninnovators.co.jp/sp/contents/column/20240229_llm.html

Nishikuma, Shunya. (2025). "Generative AI x Japanese Language Education": Let's consider its possibilities and effectiveness. *Nihongo Journal [NJ]: "Knowing" and "Teaching" Japanese (Column)*. https://nj.alc-nihongo.jp/entry/20250319-AI

NTT Docomo Business, Inc. (n.d.). What is generative AI? *IT Glossary*. https://www.ntt.com/bizon/glossary/j-s/generative_ai.html

Ochiai, Yuji. (2020). Practical using of AI natural language processing in Japanese language education: For leverage applications available in the classroom. *Journal of Japanese Language Education in Taiwan, No. 40*, Association of Japanese Language Education in Taiwan, pp.76-105.

Online Japanese Teacher's Textbook [Bona]. (2024). *[ChatGPT] 10 useful ways to use AI for online Japanese teachers!* https://bonajapaneseschool.com/3338

Research Conference between Japanese Language Education Institution Faculty and International Student Education Staff at Higher Education Institutions. (2023). *Results of a pre-survey by students and participants*. Japan Student Services Organization [JASSO]. https://www.jasso.go.jp/ryugaku/jlec/tjlec/research/study_meeting_report.html

RIMO Voice. (2025, June 21). A list of generative AI types and models! Introducing 25 services for text and image generation, etc. *Useful information*. Rimo LLC. https://rimo.app/blogs/generationai-features

SIGNATE Research Institute. (2024, August 8). *List of generative AI types and introduction of noteworthy services*. SIGNATE Inc. https://soken.signate.jp/column/list-of-generation-ai-types

Sony Group Corporation. (2025). When did the AI boom begin, with an overview and history of AI? *AI Colum*. https://developer.sony.com/ja/spresense/ai-column/ai-columns/ai-boom-beginning

Student Lifecycle Support Center [SLiCS] & Department of Teaching & Learning Support. (n.d.). *A note about generative AI*. Center for Education in Liberal Arts and Sciences [CELAS], Osaka University. https://www.tlsc.osaka-u.ac.jp/project/generative_ai/important_point.html

Tokyo Metropolitan Government Digital Services Bureau. (2024). *Guidelines for using text generation AI Version 2.0.* https://www.digitalservice.metro.tokyo.lg.jp/documents/d/digitalservice/ai_guideline/

Yoshida, Lui. (2023). Use of generative AI such as ChatGPT in education. *Research Conference between Japanese Language Institution Faculty and International Student Education Officers at Higher Education Institutions*. Japan Student Services Organization [JASSO]. https://www.jasso.go.jp/ryugaku/jlec/tjlec/research/study_meeting_report.html

Yoshimura, Yuki. (2023). Application and concerns of ChatGPT in Japanese language education: An analysis of similarities and differences in generated Texts. *CAJLE [Canadian Association for Japanese Language Education] Annual Conference Proceedings*, pp.196-205. https://www.cajle.ca/conference-proceedings/cajle2023-proceedings-2/