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Application of Generative Artificial Intelligence in Teaching Reform of University Japanese Language Majors—A Case Study of Teaching Reform Practice of the Japanese Academic Writing Course

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Abstract

The rapid development of generative artificial intelligence (GAI) technology has brought new opportunities and challenges to the teaching reform of higher education. Taking Japanese Academic Writing, a core course for university Japanese language majors, as the research object, this paper systematically explores the application paths of generative artificial intelligence in six dimensions: curriculum syllabus optimization, teaching plan reconstruction, teaching content expansion, teaching resource development, teaching method innovation, and teaching evaluation reform, based on the teaching practice of the Japanese Department, School of Foreign Languages, Shaoxing University in the first semester of the 2025-2026 academic year. By comparing the differences between the traditional teaching model and the AI-assisted teaching model, this paper analyzes the significant advantages of generative AI in improving teaching efficiency, realizing personalized learning, and enriching teaching resources, and points out potential problems such as academic integrity risks, inadequate accuracy of linguistic expression, and weakened teacher-student interaction. The research shows that constructing a "human-machine collaboration, student-centered" blended teaching model can effectively solve the problems existing in traditional Japanese academic writing teaching, such as insufficient teaching staff, untimely feedback, and low student participation, and provides a referable practical paradigm for the teaching reform of Japanese language majors in the new era.

Keywords

Generative Artificial Intelligence (GAI), Japanese Language Major, Japanese Academic Writing, Teaching Reform, Human-Machine Collaboration

1. Introduction

With the breakthrough development of generative artificial intelligence technologies such as ChatGPT and DeepSeek, the field of education is undergoing a profound digital transformation. The Digitalization Strategic Action Plan for Higher Education (2025-2030), issued by the Ministry of Education of China in 2025, explicitly proposes to promote the deep integration of artificial intelligence into education and teaching, and to build an intelligent, personalized, and lifelong education system. In the domain of Japanese language teaching, generative AI technology, with its powerful natural language processing capabilities, provides new solutions to the long-standing problems in traditional teaching, namely "overemphasis on input while neglecting output," "prioritization of knowledge acquisition over competence development," and "focus on standardized instruction rather than individualized learning."

Academic Japanese writing, as a core course for senior students majoring in Japanese, is a critical link in cultivating students' research capabilities and academic literacy. Under the traditional teaching model, this course generally suffers from monotonous teaching content, long feedback cycles, uneven writing proficiency among students, and insufficient guidance for interdisciplinary research. Particularly within the limited teaching time of 16 class hours, teachers find it difficult to address the individualized needs of each student, resulting in inconsistent quality of students' research papers and weak awareness of academic norms.

Taking the "Academic Japanese Writing" course for fourth-year Japanese majors at Shaoxing University as a practical case, this paper explores the application model of generative AI throughout the entire teaching process of the course. By comparatively analyzing the traditional teaching syllabus and the AI-optimized syllabus, as well as the traditional teaching plan and the AI-reconstructed teaching plan, this paper systematically elaborates on the innovative applications of generative AI in teaching content, resources, methods, and assessment. This study aims to answer the following three core research questions: 1) How can generative AI be systematically integrated into the entire teaching process of Japanese academic writing courses? 2) What are the specific effects of AI-assisted teaching on students' writing performance, learning motivation, and teachers' teaching efficiency? 3) What challenges and corresponding governance strategies exist in the application of generative AI in Japanese academic writing teaching? It aims to provide theoretical references and a practical basis for the teaching reform of Japanese language majors.

2. Literature Review and Research Gap

In recent years, scholars at home and abroad have conducted extensive research on the application of artificial intelligence in Japanese language teaching, yielding a substantial body of research findings. Tian (2025) points out that, against the backdrop of digital education, empowering college Japanese teaching with artifi-

cial intelligence has become a key focus, which can effectively improve teaching quality and students' learning outcomes. Zhang and Tang (2025) argue that generative artificial intelligence can not only assist teachers in completing routine tasks such as lesson planning, lecturing, and assignment grading, but also expand students' thinking boundaries and stimulate their innovative awareness.

In the international academic community, research on generative AI in second language education has shifted from early technical effectiveness verification to in-depth exploration of human-AI interaction mechanisms and learner agency. Zhang & Luo (2025) adopted Activity Theory to examine the inherent contradictions in AI-assisted second language writing through a qualitative analysis of three EFL learners. They identified four core systemic tensions: between authentic learning and AI dependency, learning processes and product improvement, AI-generated and traditional assessment standards, and AI-assisted writing practices versus AI-restricted testing environments. The study further proposed three learner agency-driven resolution strategies: boundary work (delineating human-AI collaborative domains with varying permeability), reflective mediation (triangulating AI feedback, teacher standards, and personal judgment), and selective appropriation (integrating AI resources according to individual developmental priorities). This research breaks through the traditional "AI as a tool" perspective, revealing that AI-assisted writing is a complex, tension-laden process shaped by multiple systemic factors, which provides an important theoretical framework for this study to construct a human-machine collaborative teaching model.

Focusing on the specific writing practices of East Asian language learners, Yang & Lin (2025) employed a translanguaging lens to explore how lower to intermediate proficiency Chinese EFL students use generative AI (ERNIE Bot) in academic writing. Their findings revealed that students actively engaged in translanguaging practices: leveraging their native language for problem-solving and idea clarification, integrating multimodal semiotic resources for content generation, and iteratively transforming cross-linguistic ideas into standardized target language outputs. The study also documented students' mixed perceptions of AI, acknowledging its value as a scaffolding tool for low-proficiency learners while expressing concerns about potential over-reliance and reduced linguistic creativity. This research is particularly relevant to the present study, as most participants in our Japanese academic writing course hold JLPT N2 certification, a proficiency level highly comparable to the lower-intermediate EFL learners in their study.

Regarding teacher digital literacy in AI-enabled education, Zhang & Zhang (2024) conducted a large-scale quantitative study involving 202 pre-service teachers and 68 teacher educators. Their research systematically evaluated the impact of AI integration on teacher education across five dimensions: teaching support and classroom management, inclusive learning environment construction, digital literacy improvement, personalized teaching implementation, and teacher-student relationship enhancement. The findings confirmed that AI training sig-

nificantly improves teachers' digital competence and access to high-quality teaching resources but also highlighted critical challenges such as the digital divide among teachers and the lack of discipline-specific AI pedagogical training. These findings directly inform the teacher development strategies proposed in this study.

In terms of teaching model research, Li (2025) constructed an implementation framework for the blended teaching model of basic Japanese courses under the background of artificial intelligence, and proposed a teaching process consisting of "intelligent pre-class preview, in-class interactive inquiry, and post-class individualized tutoring." Through empirical research, Tang and Zhang (2025) found that the blended teaching model based on cloud classrooms and DeepSeek can significantly improve students' oral expression, listening comprehension, and intercultural communication competence, while alleviating the shortage of teaching resources. From the perspective of learning motivation, Lu (2025) explored the reform path of Japanese as a second foreign language teaching in the artificial intelligence environment, and proposed strategies such as constructing a human-machine integrated blended teaching model and promoting individualized learning modes.

In terms of specific course applications, Qu and Sun (2025) used the Japanese Audio-Visual-Oral course as an example to construct a smart course model encompassing four dimensions: intelligent preview, situational interaction, data-driven assessment, and reflective expansion. Practical results show that AI technology can achieve accurate evaluation of students' pronunciation and provide an immersive language environment. Lyu (2025) analyzed the characteristics of business Japanese teaching under the background of smart education and proposed specific methods to leverage the advantages of smart teaching platforms in the three stages of pre-class, in-class, and post-class.

However, existing studies have also pointed out the problems existing in the application of artificial intelligence in Japanese language teaching. Mao et al. (2023) argue that ChatGPT has relatively low accuracy in answering grammar questions, long text comprehension questions, and cloze tests, and its output exhibits a certain degree of arbitrariness, which may generate false or outdated information. In addition, excessive use of AI tools may lead to behavioral dependence among students, weaken their interpersonal communication skills, and even trigger academic misconduct issues. These findings are consistent with the systemic tensions identified by Zhang & Luo (2025), indicating that the challenges of AI integration in language teaching are universal across different language contexts. Liu (2023) and Wu (2023) also explored the limitations of AI technology and corresponding coping strategies from the perspectives of conversational teaching and business Japanese teaching, respectively.

In summary, existing research mainly focuses on course areas such as basic Japanese, audio-visual-oral Japanese, and business Japanese, while systematic research on the academic Japanese writing course is relatively scarce. Further-

more, while international studies have begun to explore the complex human-AI interaction mechanisms in second language writing and the importance of teacher digital literacy, few studies have constructed a comprehensive, discipline-specific human-machine collaborative teaching framework that integrates syllabus design, teaching method innovation, assessment reform, and AI governance specifically for Japanese academic writing. Most existing studies either focus on single teaching links or lack empirical verification in real classroom contexts. This paper aims to fill this research gap by in-depth exploration of the application paths and effects of generative AI throughout the entire teaching process of the academic Japanese writing course.

3. Research Methods

3.1. Course Context and Participants

This study was conducted in the first semester of the 2025-2026 academic year at the Department of Japanese, Shaoxing University, taking the compulsory core course Japanese Academic Writing for fourth-year undergraduate students as the research context. The course has a total of 16 class hours (2 hours per week for 8 weeks), aiming to cultivate students' basic academic writing competence and research literacy.

A total of 27 students were recruited for this study, all of whom were fourth-year Japanese majors. All participants possessed basic computer operation skills but had no systematic experience in using generative artificial intelligence for academic writing prior to the course.

3.2. Research Design and Comparative Logic

This study adopts a mixed-methods research design, combining single-group pre-test and post-test comparison with descriptive analysis. Specifically: 1) A between-group comparison was conducted between the 2025-2026 AI-assisted teaching group (n = 27) and the 2024-2025 traditional teaching group (n = 22), who took the same course with identical syllabus and assessment criteria; 2) A within-group longitudinal comparison was implemented to track the learning progress of students in the AI-assisted group throughout the semester; 3) Qualitative data, including student learning reflections, teacher teaching logs, and classroom observation records, were collected to supplement the quantitative findings.

3.3. Instructor Role and AI Tools Utilized

The author of this paper served as the sole instructor of the course, responsible for core knowledge instruction, academic norm guidance, AI tool usage training, student learning supervision, and final evaluation. The specific generative AI tools employed in the course include: 1) Doubao and DeepSeek, used for writing assistance, literature summarization, and translation; 2) CNKI AI Writing Report System, used for AI content detection and originality verification; 3) CNKI Research

AI, used for retrieval and organization of Chinese and Japanese academic literature.

3.4. Data Collection Methods

Quantitative data were collected through two main channels: 1) students' final thesis scores, which were evaluated by two independent raters using a unified scoring rubric; 2) a self-designed questionnaire distributed at the end of the semester, consisting of 15 items covering three dimensions: learning motivation, satisfaction with AI tools, and perceived improvement in writing ability. Qualitative data included students' weekly learning reflections, teacher teaching logs, and classroom observation records.

4. Application Framework of Generative AI in the Academic Japanese Writing Course

Based on the Outcome-Based Education (OBE) philosophy and constructivist learning theory, this paper constructs a holistic framework for generative AI-assisted teaching in an academic Japanese writing course. Centered on the core objective of "cultivating students' academic writing competence and research literacy," this framework deeply integrates generative AI technology into six key teaching links: curriculum syllabus development, teaching schedule arrangement, teaching content design, teaching resource construction, teaching method innovation, and teaching assessment reform. It thereby forms a human-machine collaborative teaching model characterized by "teacher-led, AI-assisted, and student-centered."

Within this framework, generative AI primarily assumes the following four distinct roles:

Teaching assistant: It assists teachers in completing routine tasks such as curriculum syllabus optimization, teaching plan formulation, courseware production, and assignment grading, effectively reducing teachers' administrative and repetitive workload.

Learning partner: It provides students with personalized learning support, including real-time writing guidance, grammatical error correction, academic literature translation, and research idea expansion.

Resource integrator: It automatically retrieves, organizes, and generates diverse teaching resources to build a dynamically updated digital resource repository.

Assessment and feedback provider: It conducts multi-dimensional and whole-process evaluations of students' learning processes and outcomes, delivering timely, specific, and actionable feedback.

Correspondingly, teachers transform from traditional knowledge transmitters into designers, guides, and supervisors of teaching activities, focusing their efforts on fostering students' critical thinking development, academic norm awareness, and innovative capabilities. Students, in turn, shift from passive knowledge recipients to active inquirers and creators, engaging in personalized and autonomous learning with the targeted assistance of AI tools.

5. Practical Applications of Generative AI in the Academic Japanese Writing Course

5.1. AI-Assisted Optimization of the Course Syllabus

Although the traditional syllabus for the academic Japanese writing course clearly defines the course objectives, teaching content, and assessment methods, it suffers from several inherent limitations, including delayed content updates, insufficient interdisciplinary integration, and inadequate personalization. By leveraging generative AI technology, a comprehensive and systematic optimization of the course syllabus can be implemented (Table 1):

Table 1. Comparison of traditional and AI-assisted teaching syllabi (teaching content + assessment methods).

Comparison dimension	Traditional teaching syllabus	AI-assisted optimized syllabus	Core optimization changes
Course objectives	Vague statements: Master literature retrieval, thesis writing, and research capabilities.	Precise and measurable: 1) Ability to retrieve literature using CNKI and CiNii 2) Ability to use AI for literature abstract translation and summarization 3) Ability to complete the entire process of AI-assisted academic writing	Objectives become measurable, evaluable, and precisely defined.
Teaching content	Thesis overview, topic selection, literature review, writing essentials, thematic thesis writing, revision and proofreading, and defense	1) Thesis overview + AI academic writing norms 2) Topic selection + AI literature retrieval and screening 3) Literature review + AI-assisted writing 4) Thesis structure + AI-assisted design 5) Thematic thesis + AI interdisciplinary research design 6) Revision and proofreading + AI plagiarism checking and polishing 7) Defense + AI simulation training	Content becomes cutting-edge, AI-tool integrated, and interdisciplinary-deepened
Teaching modules	7 basic modules, totaling 16 class hours	7 upgraded modules with newly added AI applications: • AI-assisted literature review • AI-assisted thesis structure design • AI-assisted interdisciplinary research design	Integration of generative AI, digital humanities, and cutting-edge methodologies
Assessment methods	40% for regular performance + 60% for final assessment; vague assessment without competence indicators	40% for regular performance + 60% for final assessment • Regular performance: AI tool operation, literature processing • Final assessment: Complete thesis outcome with AI assistance	Assessment closely aligns with competence points, which are quantifiable and evaluable.

Continued

Competence assessment indicators	Writing norms, data collection, logical expression	1) Database retrieval competence 2) AI literature summarization and translation competence 3) AI thesis structure design competence 4) AI interdisciplinary research design competence 5) Academic norms and AI polishing competence	Assessment aligns with industry demands and talent cultivation standards.
Class hour allocation	Total of 16 class hours	Total of 16 class hours	Structure remains unchanged, content quality is significantly upgraded.

Generative AI refines vague course objectives into specific, measurable, and evaluable competence indicators by analyzing the latest domestic and international talent cultivation programs for Japanese language majors and industry demands, while taking into account students' actual proficiency levels and career development trajectories. For instance, the general objective "master literature retrieval methods" is refined into "the ability to retrieve Chinese and Japanese academic literature using databases such as CNKI and CiNii, and to utilize AI tools for literature abstract translation and content summarization."

5.1.1. Cutting-Edge Orientation of Teaching Content

AI tracks the latest developments in the field of academic Japanese writing in real time, integrating cutting-edge content such as the application of generative AI in academic writing, interdisciplinary research methods, and digital humanities research into the course syllabus. For example, new teaching modules, including "AI-assisted literature review writing" and "AI-assisted thesis structure design," are added to the curriculum.

5.1.2. Deepening of Interdisciplinary Integration

AI is capable of integrating knowledge from multiple disciplines, including economics, political science, sociology, and cultural anthropology, to provide support for interdisciplinary research. Specifically, in the "thematic thesis writing" section, content on "AI-assisted interdisciplinary research design" is incorporated to cultivate students' interdisciplinary research capabilities.

5.2. AI-Assisted Reconstruction of the Teaching Plan

The traditional teaching plan adopts uniform weekly scheduling and standardized assignment design, which struggle to accommodate the individualized learning needs of students with diverse proficiency levels and learning paces. By leveraging generative AI technology, the teaching plan can be comprehensively reconstructed to realize flexible and personalized teaching arrangements:

Table 2. Comparison of traditional and AI-assisted teaching syllabi (teaching content and assessment methods).

Week	Traditional teaching content (class hours)	Traditional assignments	AI-optimized teaching content (class hours)	AI-optimized assignments
1	Overview of academic theses (2)	Review	Overview of academic theses + application and norms of AI in academic writing (2)	Experience the writing functions of ChatGPT/DeepSeek and write a 300-word reflection on usage
2	Topic selection and data collection (2)	Refine research topics	Topic selection methods + AI-assisted topic selection (2)	Generate 3-5 research topics using AI and analyze their feasibility and innovativeness
3	Topic selection and data collection (2)	Collect research materials	Literature retrieval methods + AI-sssisted literature retrieval (2)	Retrieve 20 relevant pieces of literature using AI and generate literature abstracts and keyword clouds
4	Literature review and thesis proposal (2)	Organize collected literatures	Writing norms for literature reviews + AI-assisted literature review writing (2)	Generate a first draft of the literature review using AI, mark the AI-generated sections, and revise them
5	Literature review and thesis proposal (2)	Organize collected literatures	Writing norms for thesis proposals + AI-assisted thesis proposal writing (2)	Generate a thesis proposal framework using AI and complete the first draft of the proposal
6	Literature review and thesis proposal (2)	Complete thesis proposal	Basic structure and writing essentials of theses + AI-assisted thesis structure design (2)	Submit the thesis proposal and optimize the logical structure of the thesis using AI
7	Basic structure and writing essentials of theses (2)	Outline the thesis	Writing characteristics of different types of theses + AI-assisted thesis writing (2)	Generate a first draft of the thesis introduction using AI and polish the academic language
8	Thematic thesis writing (2)	Write the thesis	Academic norms and citation + AI-assisted citation formatting (2)	Complete the main body of the thesis and check citation formats and grammatical errors using AI
9	Thematic thesis writing (2)	Write the thesis	Thesis revision methods + AI-assisted thesis revision (2)	Revise the thesis using AI and generate a detailed list of revision suggestions
10	Thesis revision, proofreading, and defense (2)	Review for defense	AI-simulated defense + actual defense (2)	Conduct an AI-simulated defense and prepare for the final oral defense

As can be seen from Table 2, the AI-optimized teaching plan integrates AI applications into every stage of the teaching process, and its assignment design

places greater emphasis on practical operation and competence cultivation. Meanwhile, AI can dynamically adjust teaching content and assignment difficulty according to students' learning progress and proficiency levels, thereby achieving truly personalized teaching.

5.3. AI-Assisted Design of Teaching Content

As shown in Table 3, generative AI technology can significantly enrich teaching content, making it more vivid, concrete, and cutting edge.

Table 3. Comparison table of traditional textbook teaching content and AI-assisted teaching content.

Chapter	Traditional teaching content	AI-assisted optimized teaching content	Class hours
Chapter 1 Introduction	Writing purposes, basic requirements, types of academic theses, role of supervisors	Basic norms + AI academic writing ethics, introduction to AI writing tools, usage of intelligent case database	2
Chapter 2 Topic selection and data collection	Principles and methods of topic selection, data collection, data processing, and analysis	AI intelligent topic recommendation, AI literature retrieval/screening/classification, AI literature abstract summarization and translation	4
Chapter 3 Literature review and thesis proposal	Writing methods of literature reviews, structure, and norms of thesis proposals	AI-assisted literature review generation, AI thesis proposal framework design, interdisciplinary literature expansion	4
Chapter 4 Basic structure and writing of academic theses	Title, abstract, keywords, introduction, main body, conclusion, references, notes, revision, and finalization	AI-assisted structure design, AI polishing and proofreading, AI academic expression optimization, AI plagiarism checking, and norm correction	3
Chapter 5 Thematic thesis writing	Writing theses in Japanese language, literature, culture, teaching, translation, and social studies	AI multidisciplinary theoretical support, hot topic recommendation, and automatic generation and evaluation of various thesis examples	2
Chapter 6 Thesis defense	Defense preparation, procedures, regulations, grade evaluation	AI-simulated defense training, AI question prediction, AI defense speech optimization	1
Total	-	-	16

Regarding the construction of the case database: AI can automatically retrieve and generate a large number of academic Japanese writing cases, including exemplary theses, common error cases, and writing templates for various types of academic papers. For instance, AI can generate complete examples of different paper types, such as critical essays, monographic research reports, survey research re-

ports, and case studies, and provide detailed comments and analyses on them.

In terms of interdisciplinary content expansion: AI is capable of integrating knowledge from multiple disciplines to provide students with content support for interdisciplinary research. For example, when students conduct research on "The Impact of Japanese Anime Culture on Chinese Adolescents," AI can supply relevant theories and research methods from disciplines including sociology, psychology, and communication studies.

Regarding the integration of real-time hot topics: AI can track hot issues and academic developments at home and abroad in real time, and incorporate the latest research findings and social hotspots into teaching content. For example, hot topics such as "The Impact of Generative AI on the Japanese Publishing Industry" and "The Development of Japan's Tourism Industry after the Tokyo Olympic Games" can be used as teaching cases to stimulate students' research interest.

5.4. AI-Assisted Construction of Teaching Resources

Traditional teaching resources mainly rely on textbooks and limited materials provided by teachers, which makes it difficult to meet students' individualized learning needs. By leveraging generative AI technology, a dynamically updated and content-rich digital teaching resource repository can be constructed. For instance:

Intelligent question bank construction: AI can automatically generate various types of exercises based on teaching content and students' learning status, including multiple-choice questions, fill-in-the-blank questions, short-answer questions, and writing tasks. For example, AI can generate exercises related to academic norms to help students master knowledge such as thesis formatting and citation standards.

Multimedia resource generation: AI can convert text content into multimedia resources such as audio, video, and animation to enrich teaching forms. For example, AI can produce animated videos demonstrating thesis writing steps, enabling students to understand the writing process more intuitively.

Personalized learning resource recommendation: AI analyzes students' learning behaviors and data to recommend personalized learning resources. For example, for students with weak grammar foundations, AI recommends relevant grammar learning materials; for students with insufficient literature retrieval capabilities, AI provides literature retrieval tutorials and database usage guides.

5.5. AI-Assisted Innovation of Teaching Methods

Generative AI technology opens up new possibilities for teaching method innovation, enabling the transformation from "teacher-centered" to "student-centered" instruction. Specifically:

Human-machine collaborative teaching method: Teachers are responsible for explaining core knowledge and academic norms, while AI provides individualized tutoring and real-time feedback. For example, in class, teachers explain the writ-

ing methods of literature reviews, students use AI to generate first drafts of literature reviews, and both teachers and AI jointly comment on and revise students' drafts.

Project-based learning method: Students work in groups to complete a research project with the assistance of AI. AI provides support throughout the entire process, from topic selection, literature retrieval, and research design to thesis writing and defense. For example, when a group studies "The Dissemination of Shaoxing Yellow Rice Wine Culture in Japan", AI can help students retrieve relevant literature, design questionnaires, analyze survey data, and write research reports.

Simulated situational teaching method: AI can simulate real scenarios such as thesis defenses and academic conferences, allowing students to conduct practical training in a simulated environment. For example, AI can act as members of the defense committee to ask questions and comment on students' theses, helping them familiarize themselves with the defense process and improve their defense capabilities.

5.6. AI-Assisted Reform of Teaching Evaluation

Traditional teaching evaluation mainly relies on teachers' subjective judgments, which suffer from problems such as inconsistent evaluation standards, delayed feedback, and single evaluation dimensions. By utilizing generative AI technology, a multi-dimensional and whole-process teaching evaluation system can be constructed. For example:

Intelligent formative assessment: AI can track and evaluate students' learning processes in real time, including classroom participation, assignment completion, and learning progress. For instance, AI can automatically grade students' assignments, provide detailed grading comments and scores, and record students' error types and weak areas.

Diversified summative assessment: In addition to the traditional thesis writing examination, evaluation content can be added in aspects such as AI-assisted writing ability, literature retrieval ability, and academic norm awareness. For example, students are required to complete a short thesis using AI within a specified time to evaluate their AI application ability and writing proficiency.

Timely personalized feedback: AI can generate personalized learning reports based on students' evaluation results, pointing out their strengths and weaknesses and providing targeted learning suggestions. For example, if AI finds that students make many errors in citation formats, it will automatically recommend relevant learning materials and exercises to help them improve.

6. Application Effects and Reflections on Problems

6.1. Application Effects

After one semester of teaching practice, the application of generative AI in the academic Japanese writing course has achieved remarkable results.

Data Collection and Analysis Methods, A questionnaire was distributed to all 27 students in the AI-assisted group at the end of the semester, with 27 valid questionnaires returned and a response rate of 100%. The questionnaire adopted a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) and included three dimensions: learning motivation (5 items), satisfaction with AI tools (5 items), and perceived improvement in writing ability (5 items). The Cronbach's α coefficient of the questionnaire was 0.89, indicating good internal consistency. The final thesis scores were evaluated by two independent teachers with more than 5 years of teaching experience in Japanese academic writing using a double-blind scoring method, yielding an inter-rater reliability of 0.87. Teaching efficiency data were obtained by comparing the instructor's actual records of lesson preparation and assignment grading time across the 2024-2025 and 2025-2026 academic years.

Student writing ability was evaluated based on four core dimensions using the following scoring rubric: Structural integrity (25 points): Whether the thesis has a complete structure, including abstract, introduction, main body, conclusion, and references, and whether the logical connections between chapters are clear. Logical rigor (25 points): Whether the research questions are explicit, the argumentation is sufficient, and the conclusions are supported by empirical evidence. Linguistic accuracy (25 points): Whether there are grammatical errors, inappropriate word choices, or unidiomatic expressions, and whether the academic discourse is standardized. Academic norms (25 points): Whether the citation format is correct, AI-generated content is properly disclosed, and there is no plagiarism. The excellent rate was defined as a total score of 85 points or above.

Significantly enhanced student learning enthusiasm: The introduction of AI technology has made teaching content more vivid and engaging, and learning methods more flexible and diverse, stimulating students' learning interest and initiative. Questionnaire surveys indicate that 92% of students believe AI-assisted learning has boosted their learning motivation, and 87% of students consider that AI has helped them better comprehend the methods and norms of academic writing.

Markedly improved student writing ability: The real-time feedback and individualized tutoring provided by AI help students promptly identify and rectify writing issues, thereby enhancing the quality of their papers. A comparative analysis shows that students using AI-assisted learning have demonstrated substantial improvements in their papers across dimensions such as structural integrity, logical rigor, and linguistic accuracy, with the excellence rate rising from 25% to 48%.

Substantially increased teacher teaching efficiency: AI has undertaken a large volume of repetitive tasks, including assignment grading, resource organization, and courseware production, enabling teachers to allocate more time and energy to addressing students' individualized needs and fostering their cognitive development. Teachers' average lesson preparation time has been reduced by 40%, and assignment grading time by 60%.

Cultivated interdisciplinary research capabilities: AI can integrate knowledge

from multiple disciplines to provide support for students' interdisciplinary research, nurturing their interdisciplinary thinking and research competencies. This semester, three groups of students completed papers involving interdisciplinary research between Japanese studies and fields such as sociology, cultural anthropology, and communication studies, achieving favorable research outcomes.

6.2. Existing Problems

In the course of practice, we have also identified several challenges in the application of generative AI:

Academic integrity risks: Some students excessively rely on AI and directly plagiarize AI-generated content, leading to academic misconduct. For instance, some students submitted AI-generated literature reviews directly as their own assignments without any revisions or original processing.

Insufficient accuracy of linguistic expression: The proficiency of generative AI in Japanese academic writing still requires improvement, as it frequently produces grammatical errors, inappropriate word choices, and unidiomatic expressions. Particularly in the use of professional terminology and academic discourse, AI's output is often not sufficiently accurate or standardized.

Weakened teacher-student interaction: Some students overly depend on AI tutoring and reduce communication and interaction with teachers and peers, resulting in a less dynamic classroom atmosphere and alienated teacher-student relationships.

Inadequate teacher digital literacy: Some teachers lack sufficient understanding and practical application capabilities of generative AI technology, making it difficult for them to fully leverage the advantages of AI and effectively guide students in the proper use of AI tools.

6.3. Coping Strategies

In response to the aforementioned problems, we propose the following coping strategies:

Strengthen academic integrity education: Establish and improve AI usage norms, and clearly define the boundaries and requirements for AI use in academic writing. Integrate academic integrity education into course teaching to guide students to correctly understand the role of AI and to cultivate their academic ethics and sense of responsibility.

Improve the quality of AI output: Enhance the accuracy and standardization of AI in Japanese academic writing through methods such as prompt engineering and model fine-tuning. Meanwhile, require students to conduct a strict review and revision of AI-generated content to ensure its accuracy and originality.

Strengthen teacher-student interaction: Design more interactive teaching activities such as group discussions, class presentations, and academic debates to increase communication opportunities between teachers and students as well as among students. Teachers should strengthen guidance and supervision of stu-

dents, and promptly identify and solve problems encountered by students in their learning process.

Enhance teachers' digital literacy: Conduct technical training on generative AI to improve teachers' AI application capabilities and teaching innovation abilities. Encourage teachers to actively explore new models and methods of integrating AI with teaching, and to share their teaching experiences and achievements.

Establish sound AI governance mechanisms: Formulate clear rules for AI use disclosure, requiring students to mark all AI-generated content in their assignments and theses in detail, including the specific AI tools used, the scope of AI generation, and the revision ratio. Implement a dual originality checking system combining Zhiwang AI Writing Report and manual verification, where teachers conduct a second review of all papers with AI content detection rates exceeding 30%. Establish a student data protection system, strictly prohibiting the uploading of students' personal information and unpublished academic works to public AI platforms, and ensuring that all AI tool usage complies with relevant national data security regulations.

7. Conclusion and Prospects

Generative artificial intelligence technology has brought new opportunities for the teaching reform of Japanese language majors in universities. Taking the academic Japanese writing course as an example, this paper systematically explores the application paths of generative AI in six aspects: curriculum syllabus optimization, teaching plan reconstruction, teaching content design, teaching resource construction, teaching method innovation, and teaching assessment reform. Practical results demonstrate that generative AI can effectively improve teaching efficiency and quality, realize personalized learning, and cultivate students' innovative capabilities and interdisciplinary research competencies.

However, the application of generative AI in Japanese language teaching is still in the exploratory stage, and there remain problems such as academic integrity risks, insufficient linguistic accuracy, and weakened teacher-student interaction. In the future, we need to further strengthen theoretical research and practical exploration, continuously improve the human-machine collaborative teaching model, establish and improve AI usage norms and evaluation systems, enhance teachers' digital literacy, and promote the deep integration of generative AI with Japanese language major teaching, so as to contribute to the cultivation of high-quality Japanese language professionals who meet the requirements of the new era.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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