

# Japanese Education Reform and Employment Trend in the Era of Artificial Intelligence

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**Abstract:** With the increasing maturity and popularity of artificial intelligence technology, the field of Japanese education is undergoing unprecedented changes. Traditional educational methods, such as face-to-face teaching and traditional textbooks, are being challenged by personalized learning, intelligent classrooms and interactive learning platforms brought about by AI technology. At the same time, the job market also presents new positions and needs, especially in translation, simultaneous interpretation and other fields. This paper analyzes the characteristics and influence of Japanese education reform and employment trend in the era of artificial intelligence.

**Keywords:** Japanese education reform; Artificial intelligence; Employment trend

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## Introduction:

For much of the 21st century, the combination of technology and language education has been a key driver of change in education. In particular, artificial intelligence technology has brought revolutionary opportunities for Japanese education. From classroom teaching to professional development, AI not only changes traditional teaching methods, but also provides more possibilities for learners. But at the same time, the rise of this technology has created challenges for Japanese language educators. This paper aims to deeply analyze the trends behind these changes and provide valuable references for educators and learners.

## 1. Traditional methods of Japanese education and their limitations

### 1.1 Traditional methods of Japanese education

**Grammar Center Teaching:** Traditional Japanese education attaches great importance to grammar, and students need to learn a lot of grammar rules and then apply them to practical conversation and writing.

**Repetition and memorization:** The teaching of kanji (called “kanji”) in Japanese relies primarily on repetition of memorization and writing. This method emphasizes the mechanical memorization of words and sentence patterns.

The four skills are taught separately: listening, speaking, reading and writing are taught as separate units with little integration.

**Textbooks and classroom orientation:** Most of the learning content is based on textbooks and has a certain distance from daily practical application.

**Emphasis on test scores:** Especially college entrance exams, many students and educators care more about test scores than actual language ability.

### 1.2 Limitations

**Learning efficiency problem:** too much repetition and mechanical memory may cause students to lose interest in learning and affect the learning effect.

**Lack of practical application:** Due to the emphasis on grammar and testing, students may excel in school but struggle to be fluent in Japanese in a real environment.

**Neglect of listening and speaking ability:** Compared with reading and writing, listening and speaking ability is neglected, resulting in students who can read and write, but have weak oral expression and understanding ability.

## 2. Application of artificial intelligence technology in Japanese education

### 2.1 Personalized Learning

First, intelligent adaptive learning systems: By monitoring students' learning progress and outcomes in real time, such systems can provide students with customized learning plans and content. For example, if the system detects that a student is struggling with a certain part of the content, it will automatically provide more relevant exercises and tutoring.

Secondly, real-time feedback and guidance: traditional teaching often requires teachers to manually correct students' homework, and the feedback cycle is long. But with the aid of AI, students can get feedback and advice immediately after completing assignments or tests, allowing them to understand and correct their mistakes more quickly.

As in teaching Japanese fifty tones: Traditionally, students need to master fifty tones through a lot of repetition and practice. However, with the assistance of AI, the system can recommend the most suitable learning path and method for students according to their learning habits and memory patterns. For example, if the system finds that a student has trouble pronouncing the words “さ, し, す, せ, そ”, the technology can provide customized pronunciation training and examples to help the student learn faster.

### 2.2 Intelligent Classroom

First, real-time interaction and feedback: for example, in the elementary part of teaching みんなの Japanese, the teacher introduced the use of “て-form”. After the explanation, the teacher can immediately release a small test related to “て-form” using the intelligent terminal. After the students finish the test online, the teacher will immediately know the situation of each student and solve the questions accordingly. Secondly, intelligent content recommendation: When a student is confused about the use of “auxiliary words”, the system will recommend relevant video courses or articles on the use of “auxiliary words” to help him deepen his understanding. At the same time, based on multimedia and virtual reality technology, when teaching traditional Japanese culture, such as “tea ceremony”, students can experience the Japanese teahouse environment through VR equipment and interact with virtual tea masters, so that cultural learning is no longer a paper study. For example, when students perform oral exercises in the New Japanese textbook, such as “self-introduction”, the system will capture their voice in real time, compare the standard pronunciation, and provide suggestions for adjustments. For example, for the word “ありがとう,” students might be prompted to note the rhotic pronunciation of “り.” In large-class Japanese classes, teachers can quickly check in with facial recognition technology. At the same time, the system will automatically record the students' learning progress in the “Standard Japanese” textbook, such as which chapters have been learned, which exercises have been completed, to help teachers better understand the students' learning status.

### 2.3 Interactive learning platform

With the development of digital technology, the application of interactive learning platform in Japanese teaching is becoming more and more popular. These platforms have greatly increased students' interest in learning by enhancing their sense of engagement and interactivity. The following analysis is made in combination with Japanese teaching cases:

First, students may have many questions when learning the complex grammatical structures in Intermediate Japanese. The real-time question and answer function on the interactive learning platform allows them to ask questions at any time and get a quick response from the teacher or other students <sup>[1]</sup>. For example, students can find a variety of useful examples and explanations for the usage of ~たらどうですか in the discussion section.

Secondly, when preparing group presentations or projects in Japanese, students can collaborate online with teammates through interactive platforms to jointly edit documents and share resources. For example, when analyzing the novel “Night Bus”, group members can share their own interpretations and related materials on the platform.

Third, interactive features on the platform enable students to engage in simulated conversations and role play, helping them practice actual communication. For example, in the simulation of ordering food at a Japanese restaurant, students can play the role of waiter and customer, and actually apply their knowledge of Japanese. Finally, after learning to write or completing an assignment, the platform can automatically pair students for mutual evaluation and correction. For example, after writing a short essay like “My Trip to Japan,” students can read each other, evaluate and suggest revisions.

## 3. The impact of artificial intelligence on Japanese-related employment trends

### 3.1 Application of artificial intelligence in translation, simultaneous interpretation and other fields

First, with the development of deep learning and big data technology, machine translation tools, such as Google Translate, DeepL, etc., have reached a surprising level of translation quality. For example, in the translation between Japanese and other major languages, the accuracy and naturalness of machine translation have made great progress. This suggests that some basic, everyday text translation

tasks or the translation of simple business documents may rely more on machine translation.

Second, although the application of artificial intelligence in the field of simultaneous interpretation is still in its infancy, it has begun to provide necessary assistance to simultaneous interpreters. For example, AI can provide translators with contextual information, term definitions, or cultural references related to the content of the speech in real time to help them translate more accurately and fluently.

Finally, modern AI translation tools can not only complete general purpose translation, but also specialized and personalized translation for specific fields (such as medicine, law, engineering, etc.). By learning from a large number of professional field documents, AI can more accurately identify and translate industry terms and improve translation quality <sup>[2]</sup>.

### **3.2 New jobs and demand**

First, with the widespread use of AI educational tools in Japanese language teaching, there is a need for talents who can skillfully use these tools and teach. These trainers need to not only master Japanese, but also have a deep understanding of AI tools in order to integrate them into their teaching.

Second, in order to train more accurate Japanese AI models, a large amount of labeled Japanese data is needed. These tagging tasks need to be completed by people who really know Japanese, especially in complex scenes such as grammar, emotion, and context. Moreover, as more and more learning platforms and applications adopt AI technologies, the demand for talent dedicated to creating and optimizing Japanese content for AI platforms is also increasing <sup>[3]</sup>. This may include writing teaching scripts, designing interactive exercise activities, or creating targeted learning materials. For example, in order to make AI products more user-friendly, Japanese AI interface designers need to be involved in the design and optimization process of the product. It requires both understanding the Japanese learning needs of users and working closely with the technical team to design an intuitive and efficient interface.

### **Conclusion:**

In summary, the Japanese language education classroom based on artificial intelligence technology creates a more personalized, interactive and efficient learning experience for students. However, it is more important for educators to keep up with The Times and to constantly update educational methods and strategies to improve the quality of classroom teaching. With the deep integration of artificial intelligence and Japanese language education, it is believed that Japanese language education in the future will be richer, more flexible, and better able to meet the diverse needs of students.

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