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*Research Article*

## The Research about Application of Computer Network Aided Instruction in Japanese Teaching Reform\*

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### Abstract

With the fast development of globalization, more and more attentions has been paid for foreign language study especially during higher education stage. Japan as the biggest developed country in Asia has friendly communication with China, while the education of Japanese in China is not match its importance. Combined with the teaching practice experience, the computer aided language learning strategy could be applied widely in Japanese education. The following paper will begin with the current situation of Japanese teaching in university and provide reasonable recommence. The poor ability of Japanese application is mainly caused by the lack of actual situation in learning process, which could be remedied by computer technology. The computer aided language learning platform could provide various learning material by multimedia software, which is the breakthrough points of specific measurements in university Japanese learning as well.

### Keywords

Computer Aided Instruction • Japanese Teaching Reform • Multimedia Software • University Education

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The role of computer aided language learning system is the subsidiary. It is an accurate position during the early stage of procedure teaching. With the concentrate and intelligent development of computer information, the computer network is not limited in the assisting role anymore, because its convenient and popular degree (Gibbins, Sosabowski & Cunningham, 2010). It has becomes an important part of modern education, especially for language study, and it is part of spirit and willing of human. The development tendency of computer aided learning is towards personality and comprehensive model, while the direct combination of technology with teaching method could not promote education reform rather than bring negative influence on teaching quality to break the balance of learning process and influence actual practice. Computer technology plays as the middle interactive between students and learning content, which could assist the learning process and participate in the learning activity (Figure 1). The following paragraphs will highlight the current situation of university Japanese learning in China and provide reasonable suggestions for education reform. The computer network aided instruction as the best solution will be explained in detail about the possibility and specific measurements.

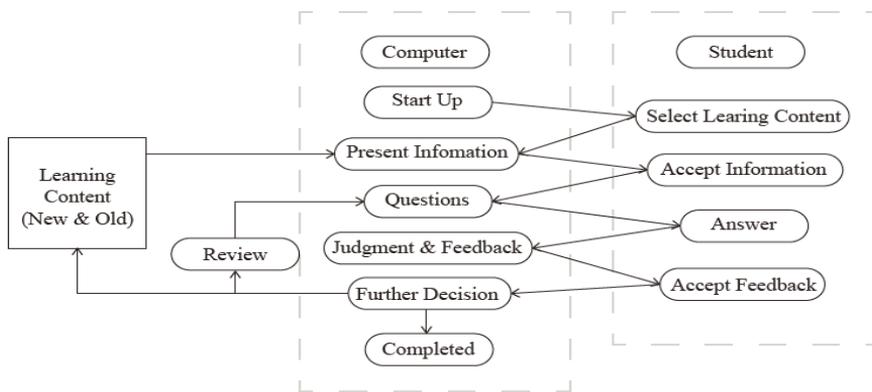


Figure 1. The function of computer in the language learning process.

The research purpose of computer aided language learning should break the limitation of merely technology assisting to adopt with the contemporary education concept (Svirko & Mellanby, 2017). This kind of development could improve the performance of computer technology in Japanese teaching, and combine with the education regulation as well, as a consequence, the education effect of Japanese could be improved largely. The computer aided language learning could not replace the foreign language education, while it is a significant important research direction of Japanese learning. In other word, the research of computer aided language learning is the main body of language reform. The study about Japanese reform in university is to find a reasonable position of computer aided language learning which could improve the importance of this computer technology and enrich the theory system of Japanese learning. The inspirations provided by computer aided language learning system for Japanese reform includes following aspect. First of all, various education theory should be combined with current language learning situation. Secondly, the actual application of computer technology in Japanese learning could not be ignored. Thirdly, the cross courses study between Japanese learning and computer technology should be highlighted. The computer network aided instruction is the best solution for Japanese reform in current Chinese university.

## The Japanese Teaching Reform in Chinese University

### Current Situation of Japanese Teaching

The traditional Japanese teaching process always ignore the leading role of students, and the class controlled by teacher is the main teaching model. The knowledge instruct has been over emphasized, as a consequence, the comprehensive language application and communication ability has been ignored (Blyth, & Labovic, 2009). The passive learning model could not achieve the expected learning outcome and waste time and energy. The teaching tools are limited in textbook, blackboard, and chalk which is boring and noneffective. Meanwhile, the real application situation has been ignored with too much focus on grammar translation, which leads to the unbalanced development between listening, speaking, reading, writing and translation (Figure 2). At the end of last century, the several new teaching method such as situation communication, and video is the main assist equipment. During the twenty first century, due to the fast development of computer technology and popularization of internet, the computer network aided instruction system has been introduced into contemporary Japanese learning in Chinese university.

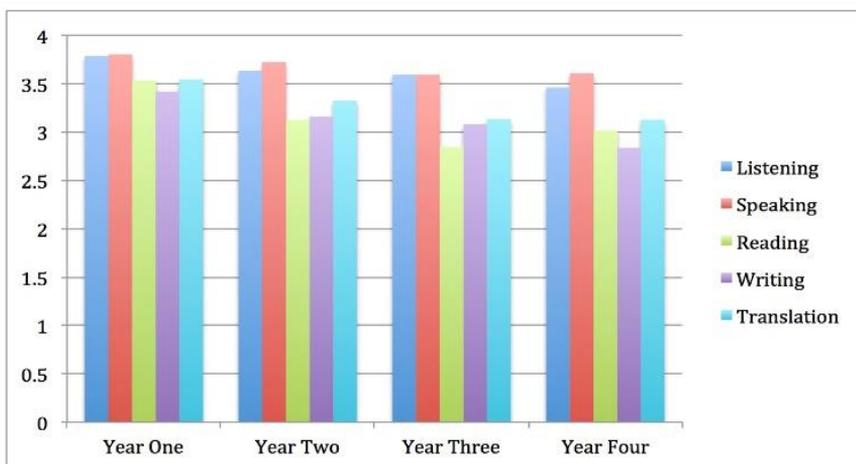


Figure 2. The General Situation of University Student Japanese Ability (Total 5 Score).

### The Necessities of Japanese Teaching Reform

The development of computer technology and the popularization of internet changes life, work even living style into a totally new one, meanwhile, this tendency of computer application bring new opportunity for Japanese reform in university. Firstly, the wide application of computer network aided instruction could provide abundant learning material to overcome the limitation of information in the traditional teaching model. As an important component of Japanese teaching, the teaching recourse in traditional teaching model is insufficient to be applied by teachers based on actual requirement. In addition, the Japanese education in traditional model is too simple to achieve the expected learning outcome. The application of computer network aided instruction

platform could enrich the teaching resource, and the PowerPoint handout could be adopted in class to create an active studying atmosphere (Croft, Danson, Dawson, & Ward, 2001). Therefore, the comprehensive Japanese applying ability could be improved especially the listening, speaking and translation ability. Secondly, the reform of Japanese teaching could motivate the study interest, which is different from the single and boring atmosphere in traditional teaching model. The multimedia software could attract student’s attention in class time, and the various material includes text, music, video even cartoon could motivate learning interest after class.

Compared with the traditional Japanese teaching model, the computer aided instruction platform could break the limitation of teaching resource, method, time and space and bring competitive advantages (Table 1). The contemporary education raise higher requirement for Japanese learning in university that the comprehensive ability of Japanese should be cultivate especially for the listening and speaking ability. The Japanese learning process could ensure the great communication ability on speaking and writing during the subsequent working and social activity. Meanwhile, the self-learning ability is supposed to be improved as well. The comprehensive improvement of Japanese is the requirement from the graduate developed economic. With the further reform of Japanese teaching, the exploration of computer network aided instruction platform is the main breakthrough point for improving of self-learning ability. For better combination between computer network aided instruction and Japanese teaching, a lot of measures has been applied during university Japanese teaching such as wide application of multimedia, exploration of new teaching method. Those measurements could break the limitation of time and space during traditional teaching model, therefore the personality development of students could be promoted.

Table 1  
*Compare and Contrast Between Computer Aided Instruction and Traditional Teaching Model*

Factors	Computer Aided Instruction	Traditional Teaching Model
Education Resource	A lot of resources could be accessed from Internet	Limited in textbook and teacher
Knowledge Quality Cost	The cost is lower, while could provide various education material	The cost is higher, and the typology is not rich
Time	Any time, and the time cost is lower	Only in class, which is a huge limitation
Location	Flexibly	Limited in classroom
Media	Multimedia computer software which relies on the development of Internet, and the cost of multimedia is reduced greatly.	The media is determined by the school facility and teacher quality, and the cost would never reduce.
Social Cost	Social cost is lower	Social cost is higher
Advantages & Disadvantages	High learning efficiency; strong interaction; motivate learning interest. Without face to face contact, and the communication is limited in Internet surrounding	Only few interaction between teacher and students, which could not motivate personal learning interest. The lifelong learning and individual teaching could not be encouraged.

How to improve the self-motivation of students draw a wide attention around the whole world, especially during the Japanese learning process. For the university Japanese teaching, the high self-motivation plays an important role in the high quality learning outcome. Generally, the self-motivation learning is the students based

on learning foundation, character of course and learning style to make a suitable learning method, which could improve the self-control and management to realize the active learning and self supervision process (Kreskey & Truscott, 2016). It is widely accepted that the self-learning ability is a self management and control ability that could form learning habit to cultivate a continuous action of making learning plan. The tendency of contemporary education is focus on the improvement of self-learning ability, especially in the internet surrounding. The changeable surrounding ask people to adapt learning behavior automatically with a large quantity information, and face various challenges. However, the knowledge provided by university class is not sufficient any more, the self-learning awareness is especially important.

For the Japanese learning, the level of self-learning ability will influence the learning outcome greatly, while the purpose of Japanese learning is assist students to achieve language apply ability. Recently, more and more universities has create a better language learning surrounding with the application of multimedia software. The computer network aided instruction platform attempt to promote the Japanese learning outcome. The traditional learning model merely focus on the knowledge given ignore the self-motivation ability promotion, which could not satisfied the requirement from current Japanese education any more. Therefore, it is necessary for current Japanese teaching reform to highlight the self-learning ability, which means that students could learn the general grammar, basic language skill as well as communication ability positively. Meanwhile, the various situations of Japanese application should be created for improving comprehensive language ability.

### **The Feasible Suggestion for Japanese Teaching Reform**

With the increase concentrate information, the computer network aided instruction platform could bring a creative reform for Japanese teaching. The computer technology could be applied in the Japanese teaching especially in university to ensure the teaching quality. Therefore, we have to take fully advantage of computer technology to assist Japanese teaching, which is the foundation of open teaching model. Japanese learning activity is a teaching process, or a self-improve process, which means that not all knowledge is accessed by teacher. The Japanese learning activity must in a real situation combine with tools or human. Only in this way, the language could be applied widely in real situation in both speaking and writing. The application of computer network aided instruction platform in Japanese learning includes following characters. First of all, the biggest advantage of this kind of teaching model is that it could establish a model that students id the center of the whole learning activity. Secondly, compared with the traditional teaching model, the Japanese learning activity with computer network aided platform is more active (Arnal, Yu, Pear, Chand & Saltel, 2018). Thirdly, this kind of new language teaching model could provide abundant material for teaching activity that could perfect the teaching content. Fourthly, the application of computer network aided instruction platform could benefit the update of Japanese learning method and education concept. Finally, the teaching ability of teacher could be improved by the multimedia software that provided by computer network aided instruction platform. Therefore, it is possible for Japanese learning to improve the self-learning ability through the computer network aided instruction platform.

## **The Establish of Computer Network Aided Instruction Platform**

The traditional teaching model has been changed by the computer network aided instruction platform, which could create vivid image and presentation for students. Some traditional teaching method has been replaced for better teaching outcome. Some difficult knowledge could be presented by the dynamic characteristic of computer technology. Therefore, for the Japanese teaching, the computer network aided instruction could not be replaced for better education reform. In addition, the computer network aided instruction could increase the teaching content within the limited class time, which means the teaching efficiency could be improved. With the multimedia software and internet communication, the explanation of difficult knowledge could be more specific and direct, hence the Japanese class could be more attractive for students. Computer network aided instruction platform could provide better learning effect from both understanding and memory, which is the traditional teaching model could not achieved. Besides that, the teacher and students under computer network aided instruction could adjust and control the teaching or learning process to satisfy the actual situation, which could benefit the personality development. The computer network aided instruction teaching model closely rely on the multimedia software, while the rapid broadcast of knowledge is the initial power of education reform. Each reform of the information collecting and broadcasting method will promote the forward development of society. Similarly, the application of teaching software could broadcast this innovative teaching method to all over the country, which could promote the reform of current education. As an important section of information, computer network aided instruction could bring a lot of possibility for Japanese education reform in Chinese university.

## **The Advantages of Computer Network Aided Instruction**

As an important supplementary form of Japanese class teaching, the main advantages of computer network aided instruction includes following aspects (Starrett, Doman, Garrison & Sleigh, 2015):

(1) The computer aided instruction platform could provide a large number of study resource that could not achieved from class. Students could learn the latest knowledge from internet, and the email and forum is the main communication approach for students to express confusion and get suitable answer. The various teaching material provided by internet could create a active surrounding to promote independent exploration for the better knowledge system construction and learning. With the abundant learning material, the knowledge could be expressed in a lot of forms to satisfied the changeable requirement of learning activities.

(2) An independent learning environment could be provided by internet, in where the students could access different knowledge based on particular characters and requirements. The large quantity, fast undated, active information contained in the internet could transform the traditional boring, simple, and limited information learning model into a creative one, in where the passive learning is replaced by independent exploration learning. The self-exam and mock experiment could be completed on the computer aided platform with the respecting of difference to establish a comprehensive and creative learning model.

(3) Compared with the traditional media, the information contained in internet is updated more rapidly. Through the computer network aided platform, the teacher could updated teaching contain based on the real situation at any time to satisfied the requirement from students. This kind of updated could be completed without the limitation of time and space that could reflect the real situation immediately.

(4) The whole teaching process combined with computer aided instruction is a integrated activity between teacher and student, which is an organic combination between human and virtual reality as well.

(5) The computer network aided instruction could provide abundant teaching strategies to satisfied requirement from different students and make the teaching methods which are difficult to realize before easier to achieve. It is possible the apply several teaching strategies and forms in internet because of the affluent resource, multimedia, and interactive character.

(6) In the computer network aided instruction platform, the role of teacher is not limited in the homework correcting. The communication could be completed by email and forum, which is convenient and effective. Meanwhile, all the question and answer could be shared with all students which is easier for teachers.

The application of computer network aided instruction with strong purpose highlight the practice activity. During the traditional teaching model, the application of multimedia by both teacher and students is blind which cause the waste of time (Nakamura et al., 2018). It is necessary to apply the computer aided teaching system into the university Japanese teaching, which is benefit for the informational and modern education reform. The wide application of computer aided teaching provide a personality learning situation which could enhance the learning interest, motivation, efficiency and quality. The high efficiency of information transition ensure the learning effect that lead to the high quality learning outcome.

### **The Specific Application in Japanese Teaching Reform**

The first function of computer network aided instruction in university Japanese teaching is providing various teaching material (Tanaka, Takamori, Uchiyama & Shiraishi, 2015). Those teaching material make by multimedia software could be treated as the specific measures as well.

(1) The Text Resource. The Japanese language learning is a graduate process, and a large quantity reading practice is required for improve language ability. The reading practice could bring a large quantity of grammar or vocabulary information which is the foundation of language application. Meanwhile, the internet surrounding could provide relevant policy, economic, social and cultural information as well, which could benefit the language learning rooted in specific surrounding.

(2) The Listening Resource. The biggest challenge of secondary language learning is the lack of learning environment. For majority of Chinese students, the Japanese ability is limited in reading and writing, and the ability of listening and speaking is too poor to normal communication. With the development of internet, the various listening resource improve the Japanese expression ability as well as correct the wrong pronunciation.

(3) The Video Resource. This kind of information is the concentration of image, text, voice, and video, which could create vivid learning surroundings for students. The study process of standard Japanese pronunciation could become easier with the motivate of study interests.

(4) Online Dictionary. The information could be shared by online dictionary, and the searching process could become easy and effective with the diversification of searching method. The online dictionary could help Japanese learner to solve the new unfamiliar vocabulary, which is extremely convenient.

(5) Language Data & Research Literature. The real situation of Japanese learning could be described by the language data and research literature to achieve further understanding. Meanwhile, the time waste in library for data searching could be saved, so the learning efficiency could be improved.

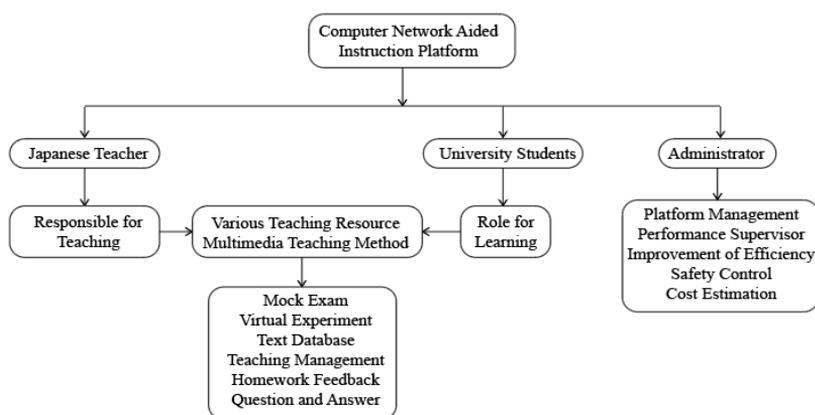


Figure 3. The role of students and teachers in computer network aided instruction platform.

In addition, this modern teaching method could widely use the multimedia software to attract student’s interest that is the second specific measurement of computer network aided instruction in Japanese reform. The role teachers in traditional teaching model has been replaced partly by computer technology in this platform (Figure 3). The operation system with Chinese and Japanese should be provided for Japanese class, then the problem that Windows98 without Japanese language could be solved. The Office2000 and Chinese Writer V5 is the best option for daily Japanese writing practice (Blyth & Labovic. 2009). The language ability of writing expression could be improved by those software. Meanwhile, teacher could make class handout by Power-point. The high quality power point material made by computer could create real language situation for Japanese learning and motive learning interest of students. Besides that, the hand writing work on black board could be relieved. Not only the software like Office 2000 but also the email could improve the writing ability of Japanese. Because of the convenience, efficiency and safety, email becomes the main communication method for people. During the traditional teaching model, the teachers have to review the handwriting homework submitted by student. That homework review process will increase the work load of teacher on the one hand, and inconvenient for students to raise up question on the other hand. If the email has been widely applied in homework review process, the work load for both teachers and students could be reduced, and the motivation for homework

completion could be increased. The homework feedback reviewed by email could be applied for study situation self-analysis.

Because of the development of computer technology and the popularization of internet, the style and habit of life, work and living have been changed accordingly. For the Japanese teaching in university, the specific reform measurements combined with computer network aided instruction includes various material collection and application of multimedia software. Those specific reform measurement on the one hand could provide various teaching resource and teaching methods, on the other hand could motivate the learning interest of students with immersive learning surrounding.

## Conclusion

To satisfied the requirement of rapid developed society, the professional talent with advanced Japanese level should be cultivated by the education reform. The current situation of Japanese education is isolated from the real applicant situation which could not meet the requirements of market. The current Japanese education is highlight too much on translation ability and grammar and ignore the cultural context in real situation. To solve this dilemma, the computer aided instruction system should be introduce into the education reform, because it could bring various teaching resources combine with the multimedia software. Combined with this attractive new teaching model, the learning motivation of students could be improved, and the passive accept model has been changed into positive learning. The teaching material provided by computer aided learning platform includes text, sound, video and image that could create active learning atmosphere. Meanwhile, the software like power point could be applied for handout preparation, therefore the teaching content could be presented in a vivid form with better quality. Computer network aided instruction platform is the best solution for Japanese learning reform at the moment in university. The advanced technology is not only the assisting role for learning process but also the middle interactive participator of the learning activity.

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