Design of Japanese Computer-Aided Teaching System Based on Natural Language Processing

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Abstract: With the increasing importance of Japanese language teaching in various institutions of higher learning, the educational community has made active research and innovation on how to improve the quality of Japanese teaching, and has made full use of various powerful measures to gradually promote the quality of Japanese teaching. On the basis of the current situation, this paper makes a comprehensive and detailed analysis of the current situation of Japanese teaching and the existing problems, and puts forward corresponding effective measures to carry out the Japanese computer-aided teaching mode under natural language processing, in order to continuously improve the effectiveness of Japanese teaching.

Keywords: Natural language processing; Japanese; Computer-aided teaching; System design

Introduction:

Computer-assisted teaching is an emerging educational model in recent years, and the course network is its core. The introduction of computer-aided teaching method can bring about beneficial promotion of university teaching reform. It can rely on the Internet to realize the enrichment and expansion of teaching resources with the support of modern information technology means, and provide students with sufficient learning content through the full realization of information resource sharing. , to make up and expand the teaching content of textbooks. At the current stage, Japanese is the most popular language major for students except English. Under the circumstance that traditional teaching methods cannot meet the needs of the development of the times, it is necessary to strengthen the in-depth research on computer-assisted teaching online teaching, and integrate this advanced education. The scientific method is applied to Japanese teaching, and at the same time, it strengthens the leading position of natural language processing, and builds efficient classrooms on the basis of rich and diversified teaching resources, so as to promote the process of college Japanese teaching reform.

1. The Current Situation of Japanese Language Teaching in Colleges and Universities in my country

1.1 The content of Japanese teaching is simple

At present, in the Japanese teaching of Chinese colleges and universities, the Japanese textbooks are still relatively simple, the development of Japanese teaching is still not fast enough, and there are still repeated education and learning in the actual teaching of Japanese courses. At the same time, due to factors such as simple textbooks and unpleasant updating, the teaching resources are not rich enough, which seriously affects the quality of Japanese teaching.

1.2 The teaching method is single

In the current Japanese teaching, traditional teaching modes such as blackboard plus chalk and PPT multimedia still occupy a relatively high proportion, and in the teaching process, most Japanese teachers only pay attention to the teaching of pure Japanese professional knowledge for exams, ignoring The true connotation of education to improve the overall quality of students through Japanese language teaching has a negative impact on the improvement of students' overall quality.

1.3 Slow development of Japanese language teachers

Although the current Japanese teaching in our country is highly valued, the development speed is not fast, and the overall quality

of Japanese teaching staff is not too high, which cannot fully meet the needs of the current national development for the training of Japanese talents.

2. The application direction of natural language processing in Japanese teaching

With the progress of society and the continuous progress of science and technology, natural language processing technology has gradually been widely used in various fields. In a nutshell, natural language processing is the communication technology between humans and machines. The application of natural language processing technology in the current Japanese teaching mainly includes the following three points: First, it focuses on the translation of Japanese textbooks, the recognition of Japanese words, the search of Japanese scenes and word sentences and other textual applications. The second is to actively use the communication and intercommunication features of natural language processing technology between humans and machines, and use natural language processing to carry out Japanese oral training, language chat between humans and machines, and simultaneous translation. The third is to push accurate information to students in a timely manner according to the needs of each student's Japanese learning, according to keywords, words and sentences that are highly searched and highly concerned Screening and screening of content to ensure the effectiveness of students learning Japanese.

3. Characteristics of Japanese computer-aided teaching with natural language processing

3.1 Continuously enrich teaching resources

Japanese computer-aided teaching that introduces natural language processing, due to the advanced characteristics of natural language processing technology and the extensive information characteristics of computer networks, the traditional Japanese teaching is no longer carried out by relying only on textbooks, and teachers and students can freely use natural language processing. Technology and network, constantly enrich teaching resources, constantly broaden the channels of teaching resources, and promote the continuous enrichment of teaching resources and the improvement of Japanese teaching quality.

3.2 Ability to continuously innovate teaching models

The introduction of natural language processing Japanese computer-aided teaching, the teaching mode is constantly innovating. In the process of teacher education, a new type of Japanese education can be carried out through the network and natural language processing technology, and the natural language processing and the storage characteristics of the computer network can be used to store the teaching content and disperse the learning according to the difficult points.

3.3 Ability to change the role of teachers in a timely manner

The introduction of Japanese computer-aided teaching with natural language processing allows students to pay more attention to the effectiveness of their learning by combining with their learning interests when learning Japanese. , This is more conducive to teachers to focus on the difficult problems of Japanese teaching, and the role of the change is more conducive to the improvement of Japanese teaching.

4. Design measures of Japanese computer-aided teaching system based on natural language processing

4.1 Continuously improve teachers' concept of natural language processing Japanese computer-aided teaching

The primary task of the Japanese computer-aided teaching system with natural language processing is that teachers and students must firmly establish the concept of Japanese computer-aided teaching with natural language processing, and strengthen the confidence and determination to teach and learn Japanese well under this system, which is conducive to the full use of the system. and the improvement of Japanese teaching level.

4.2 Japanese computer-aided teaching mode with continuous optimization of natural language processing

In the current Japanese computer-aided teaching of natural language processing, first of all, educational institutions should start with teaching technology, and continuously improve the level of natural language processing technology and computer-aided teaching technology through scientific research and active introduction, so as to provide Japanese computer-aided teaching for natural language processing. The system is well developed to lay the foundation. Secondly, teachers should deeply understand the important connotation of the Japanese computer-aided teaching system based on natural language processing, and truly choose a teaching mode that adapts

to the teaching progress, teaching requirements and students' needs. With the guidance of teachers' rich teaching experience, Japanese teaching will definitely be improved. Take a new level.

4.3 Carefully select all resources for Japanese computer-aided teaching with natural language processing

The Japanese computer-aided teaching mode of natural language processing can make full use of the advantages of the Internet, and can also obtain many teaching resources. However, not all teaching resources are suitable for Japanese teaching and learning. Therefore, in the Japanese computer-aided teaching of natural language processing, all teaching resources should be carefully selected, and the screening function of natural language processing should be fully used to filter out and improve Japanese. The resources that are of little significance in grades ensure that the teaching resources that are adapted to teachers' teaching, students' learning, and the current focus of Japanese teaching can be fully utilized.

Conclusion: Since entering the new era, a variety of new education methods have been born. The birth and development of Japanese computer-aided teaching with natural language processing is in line with the trend of the times. As a language major whose students' enthusiasm for learning is second only to English, the teaching of Japanese major courses must be reformed. Through the Japanese computer-aided teaching system of natural language processing, the teaching process is more in line with the development of today's times. Teachers should optimize and improve the current education model, strictly screen teaching resources, and guide the improvement of students' learning methods. Using this advanced and scientific new education method, they can cultivate professional knowledge and professional skills that meet the development needs of the times. More advanced applied Japanese talents.

References:

[1] Wang Bei. Research on the application of natural language processing technology in Japanese language teaching——Taking the automatic association of lexical expressions as an example [J]. Research in Japanese Education and Japanese Studies, 2019(00):68-72.

[2] Jin Yu. Design of Japanese computer-aided teaching system based on natural language processing [J]. Automation Technology and Application, 2021, 40(10): 52-55.

[3] Zhang Xiaoke. Research and practice of computer-assisted Japanese intensive reading teaching [J]. Caizhi, 2012(08):263.

[4] Yu Jingjie. Analysis of the blended teaching of Japanese reading courses under the background of big data [J]. Comparative Research on Cultural Innovation, 2020(1):122-123.

[5] Research on Knowledge Retrieval Algorithm Based on Natural Language Processing [J]. Jia Runliang. Microelectronics and Computer. 2016(10).

[6] Research on the primary and secondary relationship of texts in natural language processing [J]. Chu Xiaomin, Zhu Qiaoming, Zhou Guodong. Chinese Journal of Computers. 2017(04).

[7] Generative Linguistics and Foreign Language Teaching [J]. Li Yanhui, Wei Wei. Foreign Language Teaching and Research. 2016(05).

[8] Cross-domain text sentiment classification based on stepwise optimization classification model [J]. Zhang Jun, Wang Suge. Computer Science. 2016(07).

[9] Semantic Discovery of Geographic Information Services Using Natural Language Processing and Hierarchical Matching Methods [J]. Zhu Ruoxin, Lu Jianwei, Li Fengguang, Cui Xiaojie, Yu Bowei. Journal of Surveying and Mapping Science and Technology. 2015(05).