Design of Translation Training System Supported by Artificial Intelligence

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Abstract: The application of artificial intelligence language service products brings great challenges and opportunities to language teaching in colleges and universities: it promotes the innovation of teaching model; changes the learning mode of students; and changes the basic functions of teachers. The translation training mode in the context of artificial intelligence should be constructed from the following aspects: corpus-based artificial intelligence translation training teaching; robot-based artificial intelligence college English translation teaching; artificial intelligence college English writing teaching based on correction network; artificial intelligence based on cloud service College English translation teaching. This paper analyzes the principle and development status of current artificial intelligence translation products, and tries to explore the enlightenment that new technology brings to translation teaching. Especially in translation teaching, the translation corpus needs to be built. The research designed a set of translation training system supported by artificial intelligence, which made the translation teaching conform to the requirements of the times and improved the efficiency of translation training.

1. Introduction

Artificial intelligence translation first appeared in the 1950s, when it was called machine translation. [1]The process of machine translation is roughly divided into three stages: original text analysis, original translation conversion and translation generation. In the specific machine translation system, according to the purpose and requirements of different programs, some combine the original translation stage and the original analysis stage, and separate the translation generation stage to establish a correlation analysis independent generation system. In such a system, the characteristics of the translated language are considered in the analysis of the original language, and the characteristics of the original language are not considered in the generation of the translated language. This system is generally used when translating a language into a language. Some also separate the original text analysis stage, and combine the original translation conversion stage with the translation generation stage to establish an independent analysis related generation system. In such a system, the characteristics of the target language are not considered in the analysis of the primitive, but the characteristics of the primitive are considered in the generation of the translated language. When studying the translation of a language into multiple languages, such a system is suitable.[2]It is also possible to separate the original text analysis, the original translation conversion and the translation generation separately, and establish an independent analysis independent generation system. In such a system, the characteristics of the translated language are not considered when analyzing the primitive, and the characteristics of the primitive are not considered when generating the translated language. The difference in the original translated language is solved by the original translation. When studying the translation of multiple languages into multiple languages, an independent analysis independent generation system is usually used. Machine translation systems have undergone constant evolution and upgrades. One is a rule-based system that evolves from lexical, grammatical, and semantic, and intellectually intelligent. Another type of system is based on a corpus. At present, the long-term application of machine translation is a long-term memory cycle neural network. The model excels at modeling natural language, transforming sentences of arbitrary length into floating-point vectors of a particular dimension, and "remembering" the more important words in the sentence, allowing "memory" to be stored for a longer period of time. This model solves the problem of vectorization of natural language sentences

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well. It is very important for the use of computer to process natural language, so that the computer processing of language no longer stays at the simple literal matching level, but further penetrates into The level of semantic understanding. The translation method of “understanding language and generating translation” has been realized.

2. College English Teaching Mode under the Background of Artificial Intelligence

The development of science and technology ultimately serves humanity. The advancement of artificial intelligence products is still unable to compare the emotions in the language exchange between people and the collision of thinking. But it is undeniable that artificial intelligence is more likely to play its advantages in the field of language learning, making up for the shortcomings of students in the English learning process. [2]Based on this, we will explore college English teaching in the context of artificial intelligence from the aspects of language teaching such as writing and translation.

2.1 Create a Situational Learning Model

Corpus-based artificial intelligence enables interaction between context and learning. For example, a student scans an object around him through a mobile phone, and the artificial intelligence automatically recognizes it, and displays and reads the relevant English content of the recognized object. [3]The student can control the rhythm of the reading aloud according to the need, and whether the translation is displayed. Whether to listen to it repeatedly. This connects the “listening” in English learning with the real life of the students, which helps students to input the English language while perceiving the outside world. Another example is that the artificial intelligence student guide will bring the students to the places or areas of interest. Students can choose different life scenes and difficulty levels. Everyone can find the listening audio that suits their English level and make the listening materials more.

2.2 Artificial Intelligence College English Writing Teaching Based on Correction Network

The Correction Network is an online correction system based on corpus and cloud computing technology. It can provide timely and effective feedback and objective evaluation of students' English essays. The automatic correction system of the correction network can first contact the context, view the whole article, and then make judgments to find spelling errors, grammatical errors, etc. in the text, and give specific modifications. Teachers can combine the technical advantages of the correction network and use the automatic identification function of the system to cultivate the habit of repeatedly modifying students' English writing. First, the teacher publishes the writing task in the learning space through the writing system of the correction network. After receiving the writing task, the student can seek the guidance of the writing method and the concept of the writing framework in the system, so that the students can clearly understand the writing ideas. In the process of writing specifically, the system will provide students with certain vocabulary references according to the student's writing process, exercise students' language organization ability, give segmentation suggestions, and assist students to complete writing tasks.

3. Artificial Intelligence English Translation Teaching Based on Cloud Service

As mentioned earlier, artificial intelligence, on the basis of changing the translation process, also improves translation efficiency and optimizes the translation process. For college students who are about to step into the job, the ability to master the translation of “hardware” should be one of the main abilities to cope with various language conversions in the future. As far as college English translation teaching is concerned, it is unthinkable to leave the translation of “hardware”. Because artificial software services such as translation software, translation database, cloud translation, and corpus deeply influence the quality of translation teaching, translation materials, and translation talent training.

3.1 Translation Process

Language translation ability involves the improvement of monolingual expression ability, the improvement of logical thinking ability, the skill of bilingual conversion and the application of skills. It is a complex and high-intelligence cognitive activity with strong personal characteristics. Teachers use artificial intelligence platforms to create and provide specific context and translation tasks for students. In the process of translation, students use the technical means and resources of cloud services to solve their own difficult problems and doubts in text understanding, analysis and language processing and output. This reduces the difficulty of translation to a certain extent. It can stimulate students to explore and learn. In addition, teachers can use the system to simulate the standardized management process of large-scale translation projects, conduct practical teaching of collaborative translation tasks, mobilize students' translation enthusiasm, and give full play to the individual advantages of students, while all members are responsible for the quality of translation.

3.2 Translation Evaluation

Based on the cloud service-based artificial intelligence college English translation teaching, the translation evaluation from a single static evaluation of the student translation to the dynamic evaluation of the entire translation process. [4] The artificial intelligence system completely records the translation process of each student, and the teacher can supervise the entire process and provide immediate and accurate feedback to find ways to solve the problem with the students. This evaluation of the translation results to the excessive evaluation of the translation process can greatly increase the participation of students in the translation process. On this basis, based on the translation tasks and learning track records, students' translation learning files are established, and their translation behaviors are quantified to provide guidance for students' individualized learning. In summary, the application of artificial intelligence in college English teaching is conducive to the optimization of students' English learning experience, which is conducive to students' effective learning in English listening, speaking, reading, writing and translating, and is conducive to college English teaching. The effect is improved. [5] Science and technology are progressing, the times are developing, teachers should be freed from the simple and repetitive college English teaching work, so that more time and energy can be used for the improvement of teaching quality and the reform and innovation of teaching models. Make full use of the technical advantages of artificial intelligence to conduct effective college English teaching.

4. Design of Translation Training System under the Background of Artificial Intelligence

In today's big data, we should embrace technology and design a personalized learning system ITE (Interpreter Training Environment) that effectively improves the efficiency of interpretation training. The set of ITEs designed by the author's teaching experience can cover all parts of the translation training, and the parts are interrelated and effectively interoperable. As shown in Figure 1, there are multiple subsystems in this large system, each of which is dynamically open, and users with permissions can add or modify subsystems.

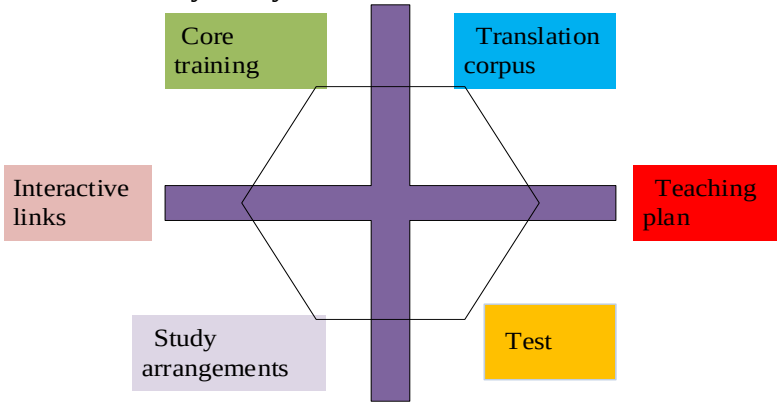

Fig.1 Translator Training System

4.1 Translation Corpus

This is the largest amount of data stored in multiple subsystems, like a large library. According to the search, the teacher or student can find the content they want to view at any time. The content classification of this corpus should also be flexible and diverse, so the labeling of the corpus is very important, and it can be quickly searched from the perspective of corpus content and corpus difficulty.[6] Moreover, this subsystem should be open to all users. Both the teacher and the student can add and modify the corpus, but the added or modified content still needs to be reviewed and edited by the literary professional maintenance personnel, and can be classified into the warehousing after passing the examination.

4.2 Teaching Plan

Students can clearly understand the teaching objectives of this semester through the teaching plan, how much knowledge they need to master, and what kind of interpreting ability they need to achieve. This allows students to have a macro grasp of the entire semester. Students can also learn about the teacher's schedule, etc., and can also prepare for each stage of teaching accordingly. In this subsystem, the teacher has the authority to upload class materials and class recordings so that students can review the review after class. Teachers can also adjust the progress of the teaching at any time according to the progress of the students' learning, taking into account the overall level of teaching.

4.3 Study Arrangements

Students can independently plan their own learning plans based on the teaching plan, including learning content and study hours. For example, in the learning period, each student can input the time period determined to be reserved for the group practice. The system will automatically select the students in the same time period and send email reminders to perform group exercises. Students can finally confirm participation in the group according to the prompts. A group of exercises during a period of time. This subsystem can effectively and reasonably arrange the time of the group exercises in addition to fully respecting the individual self-learning time of the students, and improve the efficiency of the logistical arrangement of the group exercises.

4.4 Core Training

Group exercises. Experience has shown that the formation of professional translation skills must be based on at least 1000 hours of practice). In this subsystem, students can conduct group exercises in the form of video conferences without having to practice together to get to a location. During holidays, especially during the winter and summer vacations, students can also practice in groups around the world. According to the author's many years of translation teaching experience, every time after the winter and summer vacation, students will have a certain setback in both B language level and translation skills. The reason is very simple, that is, the holiday interrupted the translation practice. The core training subsystem can improve this problem very well. The group exercises in this subsystem can also be extracted from the translation corpus and classroom practice materials in the teaching plan, and several sub-systems are interrelated.

4.5 Interactive Links

In this subsystem, students can designate a teacher to ask questions and communicate, and also evaluate the translations of other anonymous students. After the student has specified a rating for other students, the subsystem will automatically alert the designated student and provide feedback to the student. Teachers can use this platform to answer students' questions in a timely manner. They can also monitor students' group exercises, comment on them, make suggestions, and so on.

4.6 Test

Students can conduct self-small quizzes, answer questionnaires, fill out questionnaires, and even take some test exams in this sub-system. The test settings can be set by time or by capability level. The subsystem can track the match between the errors in the exam and the usual practice errors, and

automatically report the student's progress.

5. Conclusion

The breakthrough of artificial intelligence technology has greatly improved the efficiency of the language service industry, which also brings a lot of inspiration to our translation teaching. Only by mastering and utilizing good technology to improve translation teaching, the translation talents we cultivate are the talents who can truly provide efficient services to the market. Whether the efficiency of using technology can be improved, and whether the development of the talent training model can meet the needs of the big data era will determine the survival and development of future translation education. At the same time as the new thinking and revelation, we should also constantly adjust ourselves, which involves the future development of the entire translation vocational education and even the entire language service industry.

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