

## Research Article

# Practical Exploration of English Translation Activity Courses in Colleges and Universities under the Background of Artificial Intelligence

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College English teaching includes five aspects, which are cultivating students' English listening ability, speaking ability, reading ability, reading ability, and reading ability. These five aspects complement each other and are indispensable. Cultivating students' English reading ability can enhance students' cross-cultural awareness and English application ability. Among these five English abilities, only English translation can cultivate students' Chinese ability and English ability at the same time. The college stage is an important turning stage on the way of students' learning and growth. During this period, the main teaching goal of teachers is not to help students take exams, but more importantly, students could adapt to the society. Under the background of artificial intelligence, teachers need to find new and effective teaching concepts to improve the practical effect of translation teaching, which has attracted the attention and attention of college teachers in recent years. Correct use of artificial intelligence in college English translation education can greatly stimulate students' enthusiasm for learning, help students to think innovatively, and encourage students to actively participate in English translation learning.

## 1. Introduction

China's foreign political, economic, and cultural exchanges are becoming more frequent. Colleges and universities undertake the important task of cultivating English majors, providing a solid guarantee for English majors in China. Among them, the rapid translation level of English professionals is an important basis for measuring their comprehensive English ability [1]. Therefore, colleges and universities have carried out long-term exploration and innovation in English translation. If relying on artificial intelligence technology to create a good English translation environment in the field of education, it cannot only implement real-time tracking of the learning process, but also deepen the in-depth analysis of the source of learning, to help teachers and students fully understand the importance of learning [2]. Since the emergence of artificial intelligence fever in 2016, the advantages of artificial intelligence technology have become more obvious, and it has gradually occupied an important position in the education industry.

In particular, the development of a variety of translation software and the emergence of online interactive simulation scenarios have brought new reform directions for English translation activity. In the era of education informatization 2.0, information technology is becoming an important driving force for the reform of foreign language education in China. "Internet +" and "Artificial Intelligence +" have become the main theme of the development of foreign language. Graduates majoring in English translation have strong English translation application ability [3]. To make themselves stand out in the talent market, graduates also need to learn knowledge and skills in other fields. At present, the number of graduates majoring in English translation in China is relatively large, and the proportion of high-precision talents is relatively small. In addition, artificial intelligence translation will indeed eliminate low-end English translation talents. Therefore, in the future, the training direction of foreign language talents must not stay at the level of skilled talents. The biggest shortcoming in the training of new foreign language talents in the era of

artificial intelligence is Chinese literacy. This is necessary to cultivate more innovative translation talents.

By studying the current English translation talent training programs of major universities, the core professional courses can be roughly divided into three categories: English translation professional skills courses, English translation professional knowledge courses, and other related courses [4]. The setting is relatively complete, the scope of talent training is comprehensive, and the professional types are complete. However, while fully affirming the rationality of the current English translation professional talent training program, we must also see its deficiencies. Artificial intelligence is being widely used in various fields, which will undoubtedly pose a certain threat to the current employment situation [5]. The talent training program for English translation majors in colleges and universities is planned and implemented in a unified manner by the Ministry of Education. The lack of a certain innovative spirit in colleges and universities has resulted in the talent training program for English translation majors not being able to keep pace with the times. On the other hand, more than 900 English translation majors in China have expanded to more than 1,300 English translation majors. However, the planning of talent training programs and teaching resources cannot keep up with the speed of professional expansion, which leads to the tendency of colleges and universities to “homogenize” the training of English translation majors. The training concept of “general-purpose talents” is favored by major universities in China, but the training of students’ non-intelligence factors is largely ignored by them, resulting in the emergence of “universal talents”. Colleges and universities have a single English translation talent training program [6]. A single talent training program leads to a shortage of diverse English translation professionals and an unreasonable allocation of social talent resources. The country needs various English translation talents, not only academic talents with the spirit of inquiry, but also applied talents with the spirit of practice [7, 8]. The practical application of artificial intelligence technology in college English classrooms can not only help teachers prepare more scientific and advanced teaching plans, and effectively improve the quality of college English teaching, but also allow students to use artificial intelligence technology to better grasp English knowledge and improve students’ English knowledge. The enthusiasm for English learning has an important impact on the development of college English teaching.

English translation activities take English translation activity classes as a means of studying translation phenomena or activities. In the class-based translation research, it is necessary to establish a clear teaching idea and to build a teaching evaluation model [9]. The main contributions of this work are as follows. The model used to build a teaching platform, so that the applied talents of English translation activity courses can continuously improve their abilities. First, scientifically the comprehensive knowledge points related to English translation activity courses, which integrated the lesson preparation cases and videos of well-known domestic teachers. Secondly, a relaxed learning atmosphere enables students and teachers to quickly partic-

ipate in the discussion of learning tasks and skills. According to the learning needs, students are set to choose their favorite English translation activity class applied course knowledge points to study, and classify the content according to the specific learning direction and English translation activity class.

The innovation points of this paper are as follows.

- (1) Based on the previous research, the artificial intelligence translation work is a combination of information data and artificial intelligence, which represents the future development direction of translation studies
- (2) English translation activity class and descriptive translation studies are focusing on the class under artificial intelligence and application of NAETI platform, so they have distinct descriptive characteristics
- (3) The artificial intelligence translation continuously strengthens the translation foundation of future English translation activity courses, which enhances the development momentum of translation studies has strong vitality

The recent works are shown in table 1.

## 2. Materials and Methods

*2.1. Construction of Artificial Intelligence Platform.* Under the ideological guidance of “organized combination of personalized training”, the new form of education represented by online courses or MOOCs is profoundly changing the concept, experience and model of college English teaching, and the smart teaching cloud platform has developed, establishment and development, the integration of school-based teaching, learning, training, testing, and evaluation has become an inevitable trend. How to build a formative evaluation system for college English translation activity courses under the new teaching mode, the reform of the school-based talent training model has become a research hotspot and a practical breakthrough in the new era [10].

“Translation of English Academic Papers” is an extension course offered by colleges and universities for non-English majors at the undergraduate level. Specifically, the program develops students’ language skills, academic translation skills, and professional knowledge. In the process of exploring the teaching of this course, our school has gradually constructed a formative evaluation model based on artificial intelligence with school-based characteristics (as shown in Figure 1).

Figure 2 shows that this course makes full use of the management, monitoring, question bank and examination functions of artificial intelligence such as *iWrite* intelligent translation evaluation system, *iTest* test system and teaching APP, and reforms the traditional teaching evaluation system (as shown in Figure 3), and gradually reduces the proportion of course summative evaluation (60% → 40%) has increased the proportion of formative evaluation (40% → 60%) [11, 12]. It pays attention to the learning process of students

TABLE 1: The recent works.

Number	Content
1	Construction of artificial intelligence platform and intelligent translation evaluation system
2	Application in NAETI test
3	Result comparison by AI and traditional method in NAETI test

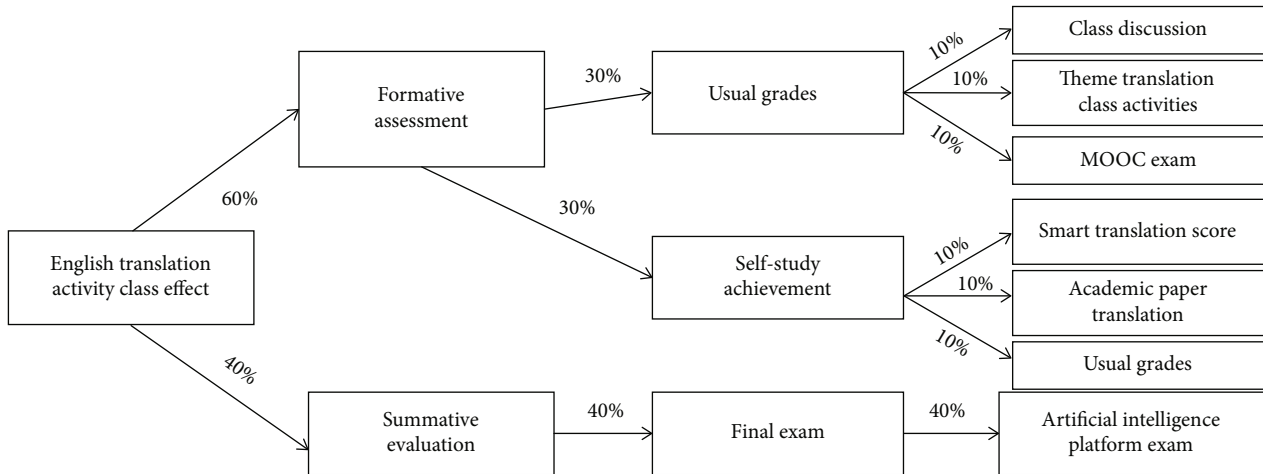


FIGURE 1: The evaluation system of English translation course activity based on artificial intelligence.

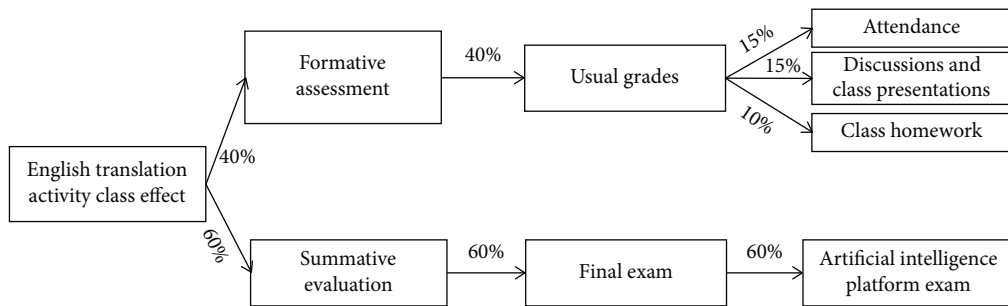


FIGURE 2: The traditional teaching evaluation model.

from multiple dimensions, and guides students to carry out in-depth personalized learning.

The evaluation model also adopts a multi-course evaluation method, as shown in Figure 3.

In the formative evaluation model of teaching based on artificial intelligence, the MOOCs are synchronously practiced and assessed, and the examinations are completed on the artificial intelligence platform. The MOOC video content summary, group activities, thematic translation and self-translation tasks are completed on the teaching APP. The intelligent translation evaluation system detects the translation goals of students in the course stage. The final exam is an online exam, which has conducted on the iTest test platform.

This evaluation model forms a curriculum evaluation system that combines the full record of the learning process by the smart teaching platform. (1) On the subject of evalu-

ation, the consistency of teacher evaluation, student self-evaluation, peer evaluation and machine evaluation is achieved: simultaneous practice and evaluation of MOOCs and examinations are scored by machines. The video summary is completed by student self-evaluation and teacher evaluation. Class discussions, group activities, etc. take a combination of student evaluation and teacher evaluation. The thematic translation adopts the method of mutual evaluation among students. Autonomous translation adopts a combination of machine scoring and teacher evaluation. Final exams are automatically scored by machines. (2) In terms of evaluation methods, the comprehensive use of various evaluation methods realizes the transformation from the traditional summative evaluation of course results to the formative evaluation of promoting learning and development. (3) In terms of evaluation goals, through self-evaluation, peer evaluation, machine scoring, teacher evaluation

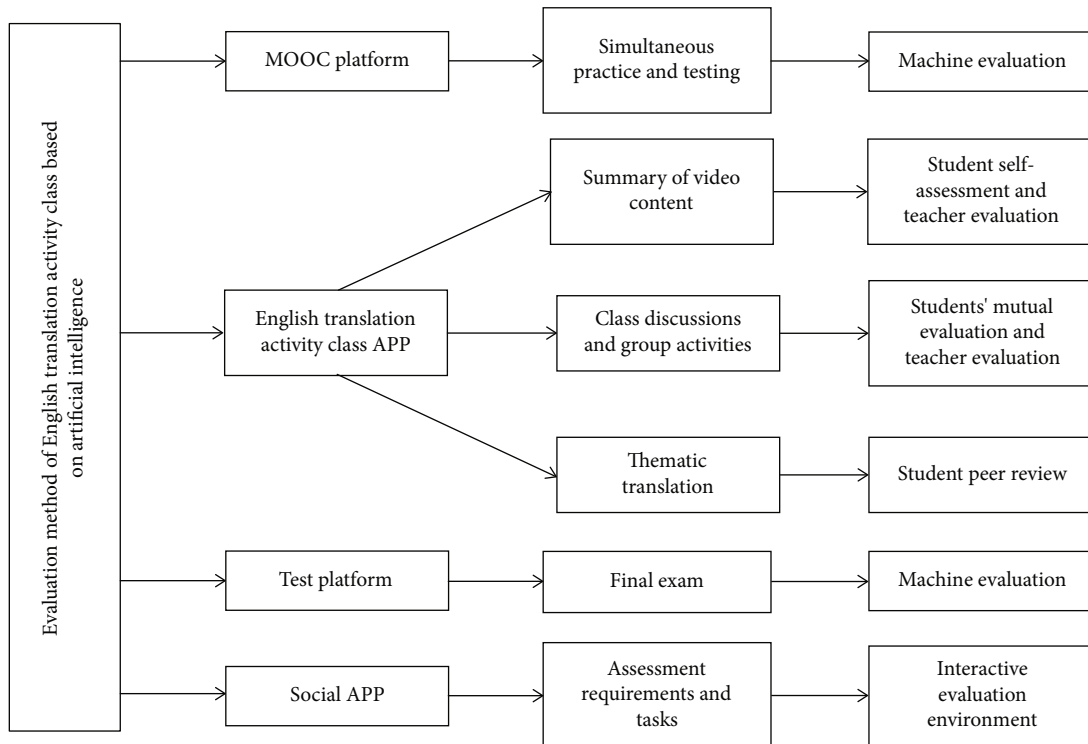


FIGURE 3: The Evaluation method of English translation activity class based on artificial intelligence.

and feedback, the transformation from evaluation of learning results to evaluation of promoting learning and development has been realized, which is more conducive to overcoming the simplification of final test scores [13]. The feedback information provided is insufficient and incomplete, which is not conducive to negative effects such as teaching.

**2.2. Research Purpose.** This research mainly examines the AI-based “English Academic” from several dimensions, including “MOOC platform”, “classroom teaching and evaluation”, “smart APP-assisted teaching”, “intelligent translation review system”, “testing system” and “course formative evaluation model”. The Influence of Formative Evaluation on Teaching of Dissertation Translation” course.

**2.3. Research Methods.** This study carried out a six-month follow-up survey on the research subjects (March-August 2021), focusing on the “MOOC platform”, “classroom teaching and evaluation”, “smart APP-assisted teaching”, “intelligent translation review system” and “translation testing system”. “Social software” and “curriculum formative evaluation model” and other content conducted more than 10 hours of in-depth interviews with the research subjects to collect data on the “implementation effect of curriculum formative evaluation” [14]. Through teachers’ teaching plans and reflection, students Data is supplemented in the form of reviews, mutual reviews, and social software. After the interview data is transcribed into text, it is submitted to the research subjects for confirmation to ensure that the data interpretation has high reliability and validity.

### 3. Case Study and Results

The design of artificial intelligence classroom belongs to the problem of system construction. Under the guidance of teaching objectives, “situational awareness, even connected and interaction, feedback monitoring, and targeted correction” and their interactions constitute an organic whole. Its internal relationship can be expressed in Figure 4.

**3.1. Application in NAETI Test.** Take the NAETI (NATIONAL ASBESTOS & ENVIRONMENTAL TRAINING INSTITUTE) interview in Academic English as an example to explain the application in figure 5. The teaching contents include the concept introduction, video introduction, skill summary, interview taboo, scenario reproduction, group mutual evaluation, teacher feedback, data retention, etc. ①In the context perception module, the ontology model is established by using the topological image method. The connotation is the interviewer’s evaluation, the extension is the topic point of view, and the application is reflected in the logical expression and time control of the discussion link. For details, please refer to Figure 5 for model design. This links to stimulate students’ psychological initiative in the form of task challenge. ②The real-time internet link can conduct real-time search based on the frequency of search terms in the NAETI interview, such as: NAETI interview topics, answering task cards, NAETI interview statement points, scoring standards, etc. Students ask random questions to extract keywords and summarize search results. ③ For split-screen interaction, teachers will arrange corresponding virtual interviewers based on the number of groups, which can be tailored from the interview videos of

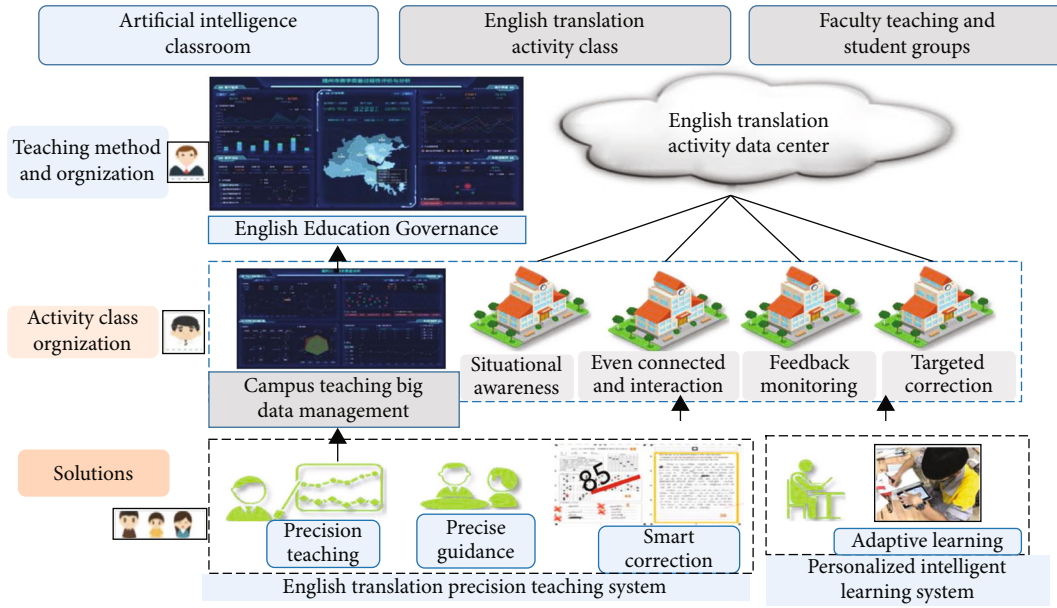


FIGURE 4: The logical relationship between artificial intelligence learning and English activity classes.

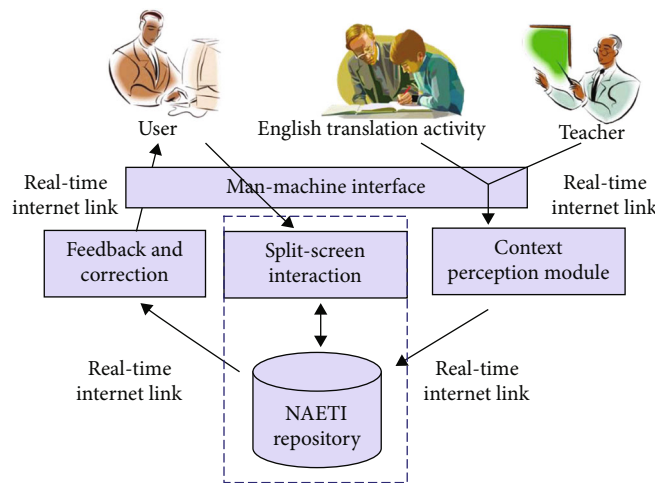


FIGURE 5: English translation class under artificial intelligence and application of NAETI platform.

network resources. The group discussion prepares responses as face- self- introduction- viewpoint exchange - discussion, etc., which conducts self-evaluation within the group. Finally, teachers conduct NAETI interviews and comments for each group, summarize each group and conduct quantitative evaluation [15]. ④ Feedback identification can design a certain number of online questions for real-time monitoring according to the content. This link requires real-name answers, so that teachers can accurately grasp the number of unknown individuals and knowledge points that are generally not mastered. Such as: interview taboos include content, etc. ⑤Target correction can make “fuzzy evaluation” based on the statistical results of the previous link, which decide whether to retell a certain problem. At the same time, fixed-point solutions can be performed for blind spots of unknown individuals.

3.2. Results Comparison. NAETI is a professional examination for English translation practitioners in China. This paper uses AI classroom and traditional teaching to conduct a comparison experiment of test scores. Through the method of this paper, a big data statistical analysis was carried out on 530 grades samples of 2 groups of parallel teaching classes with the same teaching content (7 classes in each group). 524 valid samples are obtained, and the mean and standard deviation of different groups and classes are shown in Figure 6 through statistics.

It can be seen from Figure 6 that the average grades of each class in the class taught in the traditional classroom are distributed in 65.3 to 72.8, with an average of 68.9. The standard deviation is distributed in 4.3 to 9.7, with an average of 6.8. The average score of each class in the smart classroom based on artificial intelligence is distributed in 72.6 to

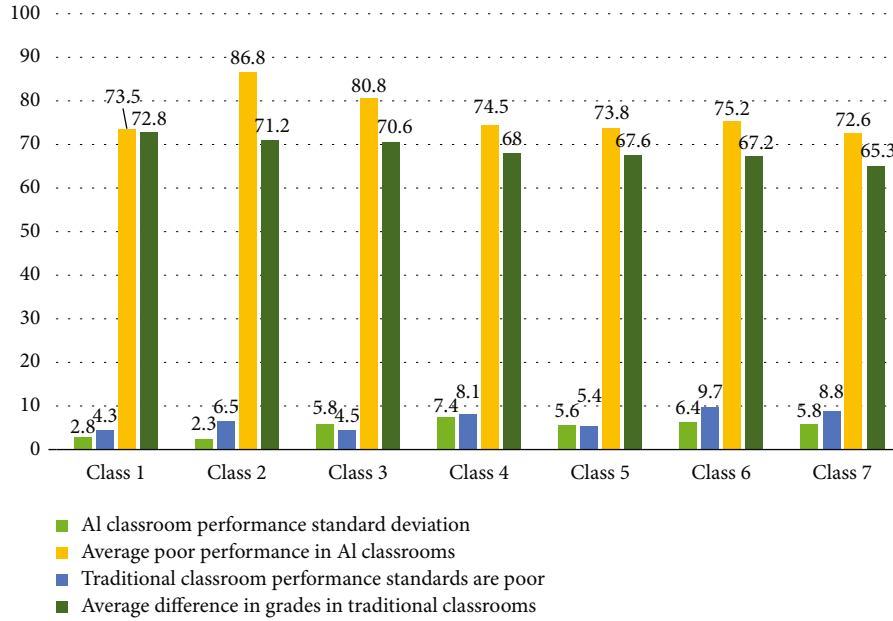


FIGURE 6: Comparison of test scores between artificial intelligence classrooms and traditional classrooms.

86.8, with an average of 79.6. The standard deviation is distributed in 2.3 to 7.4, with an average of 5.2. It can be seen that the average improvement of the method proposed in this paper is 8.3% to 21.2%, and the standard deviation is generally reduced, with an average decrease of 23.3%. It can be seen that while the overall improvement of the score samples after applying the method in this paper, the discreteness of the samples has decreased, indicating that with the high average level, the gap between students is narrowing. It further verifies that the artificial intelligence architecture proposed in this paper can promote the improvement of teaching effect.

## 4. Discussion

**4.1. Enrich Teaching Content.** In English translation teaching activities, teachers should pay more attention to the role of artificial intelligence technology. Specifically, it is to provide students with appropriate resources according to their actual situation, so as to help students accurately locate in specific learning, effectively enrich their learning content, attract their attention, enable students to actively study and improve their English ability. Teachers can take “Hamlet” literary works as the theme and students translate them reasonably. In this process, teachers can lead students to read the text first, and then English language used to interpret the content of the story reasonably [16]. On this basis, teachers can reasonably introduce artificial intelligence technology, accurately identify students’ English translation learning performance, find out students’ shortcomings and advantages, and then intelligently push relevant English translation resources. For example, students cannot understand a certain sentence very well. For this reason, teachers can guide students to reflect multiple versions of English translation resources through artificial intelligence transla-

tion software, and then let students compare and provide targeted translations for students [17, 18].

For English translation teaching, English expression and other abilities will be affected to a certain extent by students’ bilingual reading ability and skills, and there are complexities features [5]. This will design suitable translation tasks for students and create vivid and interesting situations. In its specific application, students’ translation ideas can be clearer, and they can also independently process the translation language, so as to improve their reading ability. For example, if “Environmental Protection” is used as a translation theme to organize teaching, teachers can reasonably innovate translation tools to better help students in English translation training. For example, English news about Environmental Protection is selected as translation material, and then a certain classic dialogue is extracted. In classroom teaching, teachers can first make students try to apply what they have learned to translate them. During the translation process, students will inevitably encounter some words they do not understand. At this time, teachers can guide students to use artificial intelligence translation software for assistance [19]. Although it is difficult to accurately translate the relevant text information, it can reflect the key points and main points through word translation.

**4.2. Personalized Teaching Guidance.** In the application of artificial intelligence translation, it cannot only be applied in the translation teaching process, but also can be introduced into the translation evaluation process, so that the meaning space formed by the single static evaluation and dialogue copywriting can be shared in the broadest place. The sharable space of meaning, that is, abandoning the same and rigid monophonic melody, regards advertising copy as a dialogue medium, and accommodates the “voices” and expressions of advertisers, advertising copy creators, readers, consumers, and other understanders. Advertisers have used

social media to achieve high-frequency information output, squeezing the scope of private space. Only by listening, adopting, and communicating in the form of dialogue can consumers be placed on an equally important position as interlocutors, and polyphony of multiple voices can be used to replace occluded and rigid monolingualism, so as to ensure the continuous occurrence of dialogue.

Finally, conversational advertising copy should also provide bridging of the split between “connotation of behavior” and “reality”, so as to achieve the unity of the subject through the practical behavior of dialogue. The rationality of modern civilization has led to the separation of the rational world and the real world, and human behavior has also lost its integrity [20]. An individual can only return to a concrete reality by participating in a dialogue that is taking place. Only by participating in the dialogue can the emotional will of the subject be stimulated, and responsible behavior can be produced. Finally, in the practice of dialogue, people can escape from isolated thinking and abstract concepts, which can return to the real world and themselves.

*4.3. Suggestions for the Curriculum.* In addition to general language skills courses such as listening, speaking, reading, writing, and translation, should set up professional core courses for students majoring in English translation, such as introductory language courses, introductory courses in English translation literature, and courses in the history of Western civilization, etc. In addition to the traditional English translation language knowledge courses and English translation teaching skills courses, the English translation major also sets up courses such as English translation testing courses, English translation stylistics, and modern educational technology to enhance the teaching innovation awareness and collaboration of English translation teachers. In addition to basic translation courses, colleges and universities should pay special attention to the development of students’ native Chinese language ability, such as ancient Chinese, modern Chinese, introduction to Chinese culture, etc. as core courses. Courses are offered to cultivate language talents who can spread Chinese culture. Colleges and universities should guide students majoring in business English translation to develop in the direction of international business training.

*4.4. Suggestions for Teaching Modes.* The concept of the English translation course based on core literacy is to set the goal of the English translation course from the two perspectives of the instrumental and humanistic aspects of the English translation discipline. Based on the intelligent analysis of big data, artificial intelligence can more accurately judge the problems that students have after each practice, such as grammatical errors in translation, collocation errors, etc., and directly provide modification suggestions. Artificial intelligence can also provide technical support for speech imitation, by presenting standard pronunciation, comparing students’ real pronunciation, and making error correction suggestions to improve the accuracy of pronunciation [6]. In the classroom teaching of English translation, artificial intelligence and VR technology are used to create language

and cultural scenes, providing a more intuitive visual experience, allowing students to actively integrate into the classroom, deeply experience the culture of Western countries, and promote the formation of their cultural awareness. Through the sharing of remote courses, students are exposed to a variety of learning resources and improve their sense of classroom participation.

In addition, according to the personal interests of English translation majors and the market’s requirements for “diversified” talents for English translation majors, to cultivate talents with both language skills and professional quality, elective courses in other professional disciplines are provided. Such as foreign affairs law, foreign trade economics, computer network and other related courses, students majoring in English translation have a more competitive advantage in the workplace.

## 5. Conclusion

Based on the above analysis, it can be known that the artificial intelligence translation work based on the English translation activity class is a new translation method created based on a combination of information data and artificial intelligence, which represents the future development direction of translation studies. English translation activity class and descriptive translation studies are in the same line, focusing on the observation and objective description of translation facts and their checks, so they have distinct descriptive characteristics. The use of artificial intelligence translation to continuously strengthen the translation foundation of future English translation activity courses and enhance the development momentum of translation studies has strong vitality.

Based on the English translation activity class supported by artificial intelligence, this study analyzes the current situation of college students’ learning adaptability and its influencing factors. Test scores by artificial intelligence classrooms is higher than traditional classrooms. The average improvement of the method proposed in this paper is 8.3% to 21.2%, and the standard deviation is generally reduced, with an average decrease of 23.3%. For this paper, the limitations of this study lack of in-depth research to learning adaptation in AI-supported translation activity classes. The future work helps to expand the extension based on existing research. Artificial intelligence has achieved unprecedented development and is applicable to more fields.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The author does not have any possible conflicts of interest.

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