Research Article

Blended Teaching Strategies of College English Translation under the Background of Internet

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Blended learning has taken center stage in higher education because it involves overseeing of “Online learning” and the ongoing growth of teaching reform in colleges and universities. Internet promotes the reconfiguration and integration of educational resources. The Internet has greatly magnified the role and value of high-quality educational resources. Blended teaching combines the advantages of traditional teaching and network teaching to complement each other; it not only gives full play to the flexibility and autonomy of network teaching, but also retains the connection of teacher-student emotional communication in traditional teaching. Translation teaching is an important part of college English teaching. This article mainly introduces the research of college English translation (CET) blended teaching strategies under the Internet background. This paper proposes a research plan for CET blended teaching strategies under the Internet background, including literature research method, questionnaire survey method, analytic hierarchy process, expert interview method, teaching evaluation sentiment classification algorithm based on feature-weighted Stacking algorithm, and analytic hierarchy process of the teaching effect evaluation algorithm. The experimental results of this article show that the average value of the questionnaire Cronbach’s $\alpha$ coefficient is 0.915, demonstrating that the study’s information is both extremely plausible and reasonably real.

1. Introduction

In recent years, information technology has developed rapidly and has gradually penetrated into various fields. People are inseparable from the network environment, and learning methods are gradually networked. With the gradual application of information technology in school education, these changes not only have a significant impact on learning methods but also have a profound impact on educational thinking and content methods. Both English textbooks and English university standards clearly recommend that students develop their English translation skills so that they can use English as a tool to obtain necessary information.

Artificial intelligence works in a way that is comparable to how the human brain thinks. Existing translators are far less efficient at interpreting creative content, and getting the right message to locals can be very difficult. Existing translation software struggles to accurately interpret idioms, imagery, and irony. In view of this, this research aims at some of the problems of contemporary CET teaching and tries to apply the blended teaching model to CET teaching to explore whether this teaching model is suitable for CET classes and whether it is interested in CET learning having an impact on the learning effect of English translation.

Li H found that multimedia music courses use network multimedia software and communication equipment to subvert the traditional music transmission and teaching methods, so he analyzed the innovative path of multimedia flipped classroom music teaching mode under the network environment. Using the interactive functions of the Internet, teachers can use video and multimedia PPT for classroom teaching, play music clips conveniently and quickly, and increase students’ interest in learning. Meanwhile, by using the network platform to assist the teaching mode, students can be guided to develop the habit of autonomous learning and improve their autonomous learning ability. This
research can provide some experience for CET blended teaching strategies, but it has not been proved by scientific experiments [1]. Song examines how teaching style and college English teachers’ instructional efficiency relate, as well as how emotional creativity and work performance play a part in this connection. She does this by drawing on socialization science and political realist affective philosophy. The participants were 674 English teachers from 30 universities in China. For this reason, Song conducted factor and regression analysis, and established a structural equation model. The experimental data of this study is relatively small and not very convincing [2]. Kembaren and Ms FRW believe that the practice of translation teaching is usually accomplished by discussing translation theories and translating texts into the classroom. They introduced a study conducted in the translation class. This research uses the translation office as an innovative strategy for translation teaching. This research has a high cost and is not suitable for popularization in practice [3].

The innovations of this paper are as follows: (1) A sentiment classification algorithm for teaching evaluation based on feature-weighted stacking algorithm and a teaching effect evaluation algorithm based on analytic hierarchy process are proposed; (2) A hybrid teaching strategy for CET supported by mobile technology is designed.

2. Plan on Blended Teaching Strategies of CET under the Internet Background

2.1. Method. The term “analytic hierarchy process” alludes to a judgment technique that breaks down the components of judgment into objectives, benchmarks, and criteria before doing evaluation on this foundation [4, 5]. In this study, the appropriate analytical method is mostly employed to calculate the strength of each evaluation index [6, 7], which is notably expressed in the creation of the catastrophe vector, the development of the indicator network hierarchical design, and the computation of load factors [8, 9].

2.2. Sentiment Classification of Teaching Evaluation Based on Feature Weighted Stacking Algorithm

2.2.1. K-fold Cross Validation. For stacking algorithm, the dataset used for primary learner training is naturally the original dataset, while the data used for meta-learner training should be generated by the primary learner at the first layer of the framework [10, 11]. However, if the meta-learner is trained with the data directly predicted by the primary learner, there will be a high probability that the model will be overfitted, so the k-fold cross test method is needed [12]. In the K-fold cross-validation technology, the entire dataset is divided into K equal-size parts; each partition is called a “fold.” Because there are K parts here, it is called a K fold. This method considers the characteristics of the whole sample set, making the trained learner robust and reliable [13]. Taking the fold number K = 5 as an example, the original training set D is randomly divided into five subsets \(D_1, D_2, D_3, D_4, D_5\), with \(D_i\) as the test set and the remaining four subsets as the training set to train the learner. After the training, the prediction result of the learner for \(D_i\) is \(P_{1i}\), and the prediction result for the original test set is \(R_i\) \((i = 1, 2, 3, 4, 5)\) [14, 15]. So, the sample number of \(P_1\) is equal to the sample number of original training \(D\):

\[
P_1 = (P_{11}, P_{12}, P_{14}, P_{15}).
\]

The \(R_{11}, R_{12}, R_{13}, R_{14}, R_{15}\) is processed according to the following rules: (1) If it is a regression problem, average these 5 prediction results to get \(R_1\); (2) If it is a classification problem, use these 5 prediction results to vote simply to get \(R_1\) [16]. The above is the process of training a learner with the folding number \(K = 5\) as an example. For the stacking algorithm, there are multiple primary learners in the first layer of the framework, and each primary learner needs to be trained according to the above steps. If there are \(n\) learners, \(P_1, P_2, \ldots, P_n\) and \(R_1, R_2, \ldots, R_n\) can be obtained [17]. Using them as the training set features and test set features of the second layer meta-learner of the framework, the training set \(P\) and the test set \(R\) of the meta-learner can be obtained:

\[
P = \left( (P_1, P_2, \ldots, P_n), Y \right),
\]

\[
R = \left( (R_1, R_2, \ldots, R_n), Y' \right).
\]

2.2.2. Stacking Algorithm. The stacking algorithm framework is divided into two layers. The first layer is a plurality of primary learners, and the second layer is a meta-learner. The dataset for training the primary learner and the training meta-learner are different, and the dataset for training the meta-learner is determined. The first layer of the framework is generated using the K-fold cross-check method [18]. We can get the stacking algorithm training process: the first step is to train the primary learner through the K-fold cross-check method and generate the data needed to train the meta-learner; the second step is to train the meta-learner based on the dataset generated in the first step [19].

2.2.3. Feature Weighted Stacking Algorithm. We define indicator function \(I(x)\):

\[
I(x) = \begin{cases} 
1, & \text{if } x \text{ is true}; \\
0, & \text{else}. 
\end{cases}
\]

Assuming that the size of the dataset is \(N\), the number of primary classifiers is \(T\), the primary classifier \(L_i(x)\), K-fold cross-training is completed, \(P_{m, n}\) represents the \(m\)-th element in \(P_i\), and the weight calculation method is as follows, as shown in [20, 21]. Calculate the error rate of the classifier in \(P_i\) and calculate the ratio of correct rate to wrong rate:

\[
\varepsilon_i = \frac{1}{N} \sum_{m=1}^{N} I(P_{m, n} \neq y_{m}),
\]

\[
\alpha_i = \frac{1 - \varepsilon_i}{\varepsilon_i}.
\]
In order to make the input features of the meta classifier obey the probability distribution, it is necessary to standardize the operation to get the weights of the primary classifier:

$$w_i = \frac{a_i}{\sum_{j=1}^{n} a_j}.$$  \hspace{1cm} (5)

For the primary classifier, when the prediction error rate is low, the ratio of the correct rate to the error rate is relatively large, and the weight is relatively large; therefore, the weight can be regarded as the credibility of the primary classifier [22].

2.3. Teaching Effect Evaluation Based on Analytic Hierarchy Process

2.3.1. Construct a Pairwise Comparison Matrix. Create a scoring decision grid while using entry $B_{ij}$ to denote the weighting of entry $B_i$ relative to $B_j$. There must be a total of $n(n - 1/2)$ matches [23]. A full evaluation grid may be created as follows using the persistent favourable and unfavourable matrix’s properties:

$$B = \begin{bmatrix} b_{11} & b_{12} & \cdots & b_{1n} \\ b_{21} & b_{22} & \cdots & b_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ b_{n1} & b_{n2} & \cdots & b_{nn} \end{bmatrix} = (b_{ij})_{n \times n},$$  \hspace{1cm} (6)

$$b_{ij} = \frac{b_{ij}}{b_{ii}}, \quad j = 1, 2, \ldots, n.$$

2.3.2. Calculate Single-Level Weight Ranking. In a process known as “hierarchies separate selecting,” the evidence to believe from the evaluation grid is used to determine the relative relevance of such keywords from another tier to similar indexes from the layer before. It serves as the foundation for classifying the significance of each indication at this level in comparison to those at the level before it [24, 25]. Stabilize the evaluation matrix’s row-by-row item counts:

$$\bar{b}_{ij} = \frac{b_{ij}}{\sum_{k=1}^{n} b_{kj}}, \quad j = 1, 2, \ldots, n.$$  \hspace{1cm} (7)

Table 1 shows the specific process of the mixed teaching strategy of the English Band 4 test under the Internet background.

3. Experiment on Blended Teaching Strategies of CET under the Internet Background

3.1. Designing a Blended Teaching Strategy of CET Supported by Mobile Technology

3.1.1. Preview before Class. Before class, the teacher will send the background knowledge and theoretical knowledge related to English translation to the students to create a stable preview situation for the students. At this stage, translation demonstration materials are used as the main learning resource. Teachers will promote carefully prepared multimedia content to students in the form of pod casts. Students will learn content independently through listening comprehension and comment answering test questions.

3.1.2. Learning in Class. In classroom teaching, the teacher instructs students to use English learning machines, mobile phones, platform computers, laptops, and other mobile devices to carry out autonomous learning and exercises at appropriate times. If you need to ask questions and feedback, you can use network communication to understand the classroom teaching effect in real time and adapt to the teaching in time. Students can also use mobile devices to view information on the Internet. In the entire classroom teaching stage, teachers must adopt large-scale strategies, gradual transition from teacher to teacher, monitoring, etc.

3.1.3. After Class Development. Through organized classroom learning, students have a certain understanding and practice of English translation, and a deeper understanding of English language knowledge. In the classroom teaching, the teachers also carried out Chinese-English and English-Chinese education for students’ translation difficulties. It can be said that after preclass preparation and class study, students have basically mastered the content of the translation unit, which has improved the accuracy and proficiency of translation.

3.2. Case Design

3.2.1. Teaching Resources. The online teaching resources of this research are carried out on the U Campus Smart Teaching Cloud Platform (“U Campus” for short), which is an online teaching cloud platform that focuses on providing one-stop support for teaching, learning, evaluation, and research for foreign language teaching in universities. The platform integrates various functional modules such as digital courses, classroom interaction, lesson preparation resources, teaching management, comprehensive evaluation, special evaluation, and independent learning resource library, and uses stable cloud platform services to provide efficient. The U campus platform is an online education platform, mainly serving the national undergraduate colleges and higher vocational colleges. The platform offers 116 online courses for free to help college students study at home and support universities in conducting distance teaching.

3.2.2. Teaching Strategies and Methods. This step is applied to the three stages of the entire teaching: preclass teachers use the platform to formulate part of the students’ autonomous learning content and monitor the students’ autonomous learning effects through the monitoring function of the U campus learning platform; the teachers show students
the unit content, pictures, and video teaching resources in class, let students discuss in class, and show them in groups in class; after class, students will submit study and discussion results in groups as a unit and complete the unit online quiz.

3.2.3. Task Release and Completion. The task of the teacher in the preclass stage is to complete the construction of background knowledge, preclass task assignment flip content selection; the teacher publishes the background information preview of this unit on the U campus smart learning platform before class task. Students’ preclass task is to complete the preclass information comprehension of this unit in groups, including basic grammar knowledge, background information knowledge, and topic-related material preparation.

This part of the experiment proposes the above steps to be used in the research experiment of CET blended teaching strategy under the Internet background, as shown in Figure 1.

### 4. Blended Teaching Strategies of CET under the Internet Background

#### 4.1. Survey Results

Automated stratified random is used for the survey questions. A maximum of 724 surveys were given to students enrolled in the faculty’s English translation program, and 719 genuine answers were retrieved, yielding a 99.31% efficiency rate.

(1) The subjects of this questionnaire are students who have received English translation education in universities. A total of 719 students have effectively participated in the survey. Among them, from freshman to senior year, boys to girls all participated in the survey. The specific results are shown in Table 2 and Figure 2 for the “Have you participated in blended teaching” set in the questionnaire.

As can be observed from the chart, most students who have not participated in blended teaching appear in the freshmen, and they have been generally
Table 2: The results of whether you have participated in the mixed teaching survey.

| Participation                        | Freshman | Sophomore | Junior | Senior | Total |
|--------------------------------------|----------|-----------|--------|--------|-------|
| Have participated in blended teaching-Boys | 88       | 83        | 81     | 79     | 331   |
| Have participated in blended teaching-Girls | 94       | 97        | 83     | 80     | 354   |
| Have not participated in blended teaching-Boys | 8        | 4         | 3      | 2      | 17    |
| Have not participated in blended teaching-Girls | 10       | 2         | 4      | 1      | 17    |

Figure 2: The results of whether you have participated in the mixed teaching survey.

Table 3: University students holding mobile smart terminals.

| Mobile intelligent terminal | Freshman | Sophomore | Junior | Senior |
|-----------------------------|----------|-----------|--------|--------|
| Mobile phone                | 200      | 186       | 171    | 162    |
| Tablet                      | 112      | 129       | 109    | 131    |
| Laptop                      | 146      | 157       | 159    | 162    |
| Kindle                      | 37       | 29        | 19     | 26     |
| Total                       | 495      | 501       | 458    | 481    |

Figure 3: University students holding mobile smart terminals.

Table 4: Cronbach's α coefficient.

| Changeable                | Combination of dimensions | α Coefficient of each variable | Worldwide α factor |
|---------------------------|---------------------------|-------------------------------|-------------------|
| Educator                  | Educator Caliber          | 0.917                         | 0.921             |
| Curriculum of programs    |                           | 0.926                         | 0.921             |
| Develop and improve       |                           | 0.921                         |                   |
| Ecological studies        | A type of severe          | 0.889                         | 0.898             |
|                           | A multicultural setting   | 0.907                         |                   |
| Educating excellence      | Complexity                | 0.937                         | 0.934             |
|                           | Nuance                    | 0.931                         |                   |
| Students                  | Creativity drive          | 0.893                         | 0.907             |
|                           | Creativity standard       | 0.921                         |                   |
exposed after entering the university. In blended teaching, the number of people who have not participated in blended teaching from freshman to senior year shows a downward trend.

(2) Students studying English translation at schools are the topic of this survey form. A total of 719 students have effectively participated in the survey. Among them, from freshman to senior year, boys to girls all participated in the survey. The survey results of the possession of mobile smart terminals of college students set in the questionnaire were counted, and graphs were drawn, as shown in Table 3 and Figure 3. 719 students in all have effectively taken the survey. Boys and girls of various ages, from freshmen to seniors, took part in the poll. Table 2 and Figure 3 display the specific outcomes.

From the data in the table, it can be observed that all freshmen to seniors hold mobile phones; laptop ownership is on the rise from freshmen to seniors, and seniors all hold laptops due to the need for graduation thesis. It can be observed from the situation of college students’ mobile terminal equipment holdings that the higher rate of college students’ holding of mobile terminal equipment is conducive to mixed teaching.

4.2. Questionnaire Reliability Analysis. An alpha coefficient, often known as Cronbach’s alpha, is a widely utilized convergent validity technique. In principle, the far more accurate and logical the survey or index, and more trustworthy the findings are, the greater the internal consistency. The survey has essentially lost all of its utility. Table 4 and Figure 4 both give the data of Cronbach’s alpha in this survey.

The average Cronbach’s α coefficient is 0.915, which indicates that the reliability of the questionnaire is high, and the content of the questionnaire is more real and feasible.

5. Conclusion
As society’s demand for translators continues to grow, the issue of translation teaching has gradually attracted the attention of the academic community. Translation teaching has always been the primary task of college English teaching, but the teaching effect has not reached what people think.

For effective teaching design and teaching practice, reasonable and comprehensive teaching analysis is an indispensable prerequisite. Teaching is like running a complicated but well-structured machine. Only by clearly clarifying the use characteristics and operating methods of each part can we master the overall situation, adapt to the design, and adjust in time.

This article summarizes the current situation and problems of college English teaching through literature research and other methods, and analyzes the application and advantages of mobile tools in teaching. On this basis, combined with the application of the mobile tool U campus, a theme-based CET hybrid teaching design was carried out, and under this framework, the design of college English teaching resources and teaching mode that integrated the mobile APP and U campus was completed.

Data Availability
No data were used to support this study.

Conflicts of Interest
The authors declare that there are no conflicts of interest regarding the publication of this article.

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