

A Practical Path of Civics Case Bank for “Understanding Contemporary China” University English Course from the Perspective of Blended Learning Model

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Abstract: In recent years, the organic integration of curriculum Civics into the cultivation of English majors has become a hot issue in the education sector. On the basis of the known Civic-Political value of the Understanding Contemporary China series of textbooks, we obtain the Civic-Political cases of Understanding Contemporary China for university English courses through data mining and preprocessing, and use BERT, BiLSTM, and CRF to categorize the Civic-Political cases, and ultimately construct a kind of Civic-Political case base for university English courses that integrates Understanding Contemporary China. Subsequently, a combination of the case base and the blended learning model was used to establish a practice path for Civics and Politics in college English courses from three aspects: teaching evaluation system, classroom teaching design, and case design, and to analyze it with empirical inquiry. There is a certain difference and a big gap between the average scores of the two classes, and the difference between the average scores of their scores is 12.1, and there is a significant difference at the level of 0.05, which indicates that the use of the blended learning model to incorporate the Civic-Political cases in the university English course of Understanding Contemporary English has an obvious role effect. In addition, based on the results of the questionnaire, it can be seen that the experimental class students' knowledge mastery, thoughts and emotions have been significantly improved, which fully verifies the feasibility of the research program in this paper.

Keywords: BERT; BiLSTM; CRF; blended learning model; college English; course Civics case base

1. Introduction

Under the background of the era of deep development of globalization, cultivating compound talents with international vision and cross-cultural communication ability has become an important mission of higher education [1]. With the continuous improvement of China's comprehensive national power, the international community has an unprecedented demand for understanding the real, three-dimensional and comprehensive China. This reality puts forward new requirements for the cultivation of university English majors, who should not only master solid language skills, but also have the ability to tell China's story well in English. With the launch of the “Understanding Contemporary China” series of textbooks, university English teaching has been given a new mission, and the main direction of the development of the course is “thinking and politics” [2-3].

However, the traditional single teaching model is difficult to meet the individualized needs of students and achieve the coordinated development of ideological and political education and the English major. The blended learning model, supported mainly by big data, the Internet, and information technology, adopts the main teaching methods of “offline self-study, task-driven” + “online exploration and practice” + “offline review and consolidation”, providing support for solving the above problems [4-6]. Its advantages are mainly reflected in the following: First, from the teacher “teaching” to the



students “self-study”, focusing on students' self-learning, autonomy [7-8]; Secondly, it can form a powerful teaching + learning cycle system, teachers can arrange the study time and formulate teaching strategies after determining the teaching objectives, and on the basis of analyzing the students' learning situation, they can arrange the college English course assignments in a targeted way, and in the process of organically integrating the elements of Civic and Political Education, they can accurately match the online resources with the needs of the students [9-10]; Thirdly, it can organically integrate the elements of Civic and Political Education in conjunction with the textbook content to help students establish the correct three views [11]. In addition, in this context, we can build a case base for Civic-Political thinking in university English courses based on “Understanding Contemporary China”, and utilize real-life events or situations to encourage and develop students' active participation in discussion and reflection, so as to further promote Civic-Political thinking in university English courses [12].

Regarding the relevant studies on the importance of conducting Civics in university English courses, literature [13] points out that the integration of Civics education in university English courses can make up for the shortcomings of traditional teaching in terms of ethical responsibility and global engagement, and emphasizes that this integration plays a key role in fostering responsible global citizenship by reinforcing critical thinking and interdisciplinary design. Literature [14] analyzes the innovative path of Civics and Politics in university English courses under the background of digital transformation, pointing out that by constructing a digital technology-driven teaching framework, improving teachers' digital literacy, and building a multimodal corpus, language proficiency and Civics and Politics literacy can be effectively fused to cultivate high-quality talents with a sense of nationalism and a global outlook. Literature [15] explored the strategy of Civic and political integration in university English reading teaching based on the output-oriented method, and pointed out through case studies that combining language learning with Chinese and Western culture comparison and personal narratives can effectively enhance students' cross-cultural awareness, critical thinking, and English language proficiency, so as to realize the organic unity of knowledge, skills, and values. Literature [16] examines the implementation effect of the “Civics + Linguistics” integration model in university English courses through empirical case studies, pointing out that the model can effectively improve students' participation, language comprehension and logical thinking, and emphasizing the important value of micro teaching practice in validating educational theories, promoting teachers' research transformation and improving the system of Civics and Linguistics. Literature [17] analyzes the necessity of integrating ideological and political education into university English courses, pointing out that teachers need to explore the elements of ideology and politics according to the characteristics of the discipline and integrate them into classroom activities, so as to realize the cultivation of students' ideological and moral integrity and comprehensive literacy in the process of knowledge transmission. Literature [18] analyzes the path of integrating ideological and political education into teaching based on the TPACK framework under the background of “Internet+”, taking the university English reading course as an example, and points out that the Internet platform can effectively support the integration of information technology and value leadership, and examines the necessity of innovation in the teaching mode and assessment mechanism. Literature [19] focuses on the integration of college English teaching and Civic and Political Education in the context of the new curriculum emphasizing the orientation of human education, and examines the specific penetration strategies by analyzing its key role in cultivating students' moral qualities and values, thus emphasizing the necessity of curriculum Civic and Political Education in enhancing students' comprehensive quality and ideological and political level. Literature [20] analyzes the current situation of Civic-Political education in university English courses, points out that there are problems such as the disconnection between theory and practice and the lack of resources, and puts forward the strategy of integrating Civic-Political elements and innovative teaching methods, so as to provide guidance for the curriculum reform and the practice of educating people.

In addition, based on critical pedagogy and socio-cultural theory, [21] analyzes the strategy of integrating Civics and Politics into university English courses, pointing out that students' critical thinking and cultural awareness can be effectively enhanced through critical teaching, diversified materials and interactive activities, thus emphasizing the key role of language education in cultivating active participants in the global society. Literature [22] analyzes the importance of curriculum Civics from the University English Teaching Guide, and points out that Civics elements can be effectively integrated into university English teaching through teacher guidance, classroom practice and extracurricular activities. Literature [23] analyzes the feasibility of Civic Politics in college English courses in the context of New Liberal Arts, and based on the framework of Civic Politics in Foreign Languages, puts forward a specific implementation path covering teaching materials, classroom activities and assessment system, thus emphasizing the nurturing goal of integrating values guidance throughout the whole process of language teaching. Literature [24] examines the necessity of integrating Civic and Political Education into higher vocational English courses, and points out that

optimizing the curriculum design, innovating the teaching methods and perfecting the evaluation mechanism can effectively improve the quality of teaching and promote the comprehensive development of students' comprehensive literacy and professional ability. Based on the principle of high-impact practice, [25] proposed a comprehensive framework for integrating Civic-Political education and English language teaching in universities, analyzed four cases, pointed out that contextualization of content, pedagogical innovation, reflective assessment, and interdisciplinary cooperation are effective paths of integration, and emphasized the key roles of technological empowerment and teacher training in bridging the gap between language proficiency and ideological cultivation, and in cultivating graduates with global competitiveness. Literature [26] examined the application effect of continuation mode and project-based learning in English writing courses in Civics and Politics through questionnaires and case studies, pointing out that the integration can significantly improve students' writing ability and ideological quality, and put forward improvement measures such as optimizing the curriculum design, strengthening the teacher training, and improving the assessment system in view of the problems of insufficient resources and single assessment. Literature [27] starts from the three dimensions of cognition, emotion and ability, and through the construction of the theoretical framework of "content-process-context" and the path of systematic integration, it examines the implementation mechanism of integrating the elements of ideology and politics into the university English curriculum, and designs an assessment system that covers multi-dimensional indexes and optimizes the feedback, so as to emphasize the importance of achieving an organic integration of instrumental and humanistic aspects. The key role of the integration of instrumentality and humanity in the implementation of the fundamental task of cultivating moral characters is emphasized. Literature [28] describes the importance of integrating Civic and Political Education in college English teaching, points out that it helps to improve the moral quality of students and achieve the teaching goals, and discusses the specific methods to realize the organic integration of the two. Literature [29] examined the effect of the "output-oriented" language and Civic-Political integration teaching model in comprehensive English courses through two rounds of action research for non-English majors, pointing out that the model can effectively promote the joint development of students' English skills and ideological and political qualities. Literature [30] focuses on the practical path of Civic-Political thinking in university English courses in ethnic institutions, examines the opportunities and challenges through literature and case studies, and builds a theoretical framework, emphasizing the important role of this fusion in enhancing students' cultural self-confidence and fostering the sense of community of the Chinese nation.

In this paper, through reviewing relevant materials and literature, we learned the value of the Civic and Political Education of the Understanding Contemporary China series of textbooks, then carried out mining and pre-processing of Civic and Political cases of Understanding Contemporary China for university English courses, and finally completed the collection of Civic and Political cases of Understanding Contemporary China for university English courses. In order to improve the fit between the Civic and Political cases and the university English course, the Civic and Political cases of the university English course were automatically categorized through BERT, BiLSTM and CRF, and the construction of the Civic and Political case base of the Understanding Contemporary China university English course was also completed. Taking the teaching evaluation system, classroom teaching design, and case design as the entry point, we adopt the combination of the case library and the blended learning model to complete the design work of the Civic and Political Practice Path of College English Courses and carry out in-depth investigation and analysis of it, aiming at verifying the practical application value of this paper's research proposal.

2. Construction of Civic and Political Case Bank for University English Courses

The case bank will focus on the collection, integration and storage of information resources for the "Understanding Contemporary China" college English course, so as to build a high-quality resource bank and promote the development of the course's Civic-Political thinking in the direction of being more precise, systematic, professional and personalized. The content of the case library covers rich Civic-Political materials such as historical events, social phenomena, national policies, literary classics, science and technology as well as international current affairs hotspots. In the process of construction, the awareness of integration should be strengthened, the Civic-Political elements of the resources in the library should be refined and interpreted in depth, and the structure and resource entries of the case library should be optimized continuously in order to continuously improve its quality and effect. In order to further expand the Civics case base of Understanding Contemporary China for college English courses in the future, and to meet the demand of not having to manually label the data mechanically, it is urgently needed to construct an automatic categorization model of the Civics cases for college English courses, so that the categorization of the Civics cases will be completed automatically when

more Civics cases are acquired in the future.

2.1. Understanding Contemporary China textbook series

Understanding Contemporary China was born in the strategic context of enhancing China's international discourse power, and was jointly developed by the Ministry of Education in cooperation with experts in foreign language disciplines and Civics and Politics. The Civic-Political value of the textbooks for college English courses permeates the whole teaching process through the dual-track mechanism of explicit and implicit:

At the explicit level, national development achievements and core value symbols are directly presented. For example, Unit 2 uses World Bank data to compare the efficiency of poverty alleviation between China and the rest of the world, and emphasizes the connotation of “richness and strength” with the empirical evidence that “the incidence of rural poverty has dropped by 45.36 percentage points”. Unit7 visualizes the institutional practice of “justice” by analyzing the provisions of the “Belt and Road” project.

The implicit level pays more attention to the cultivation of thinking paradigms: Unit4 takes Huawei's 5G patent layout and compares it with the case of Qualcomm's monopoly, guiding students to generate institutional self-confidence in the discussion of technological autonomy, and Unit9 analyzes the misinterpretation of the “Dynamic Zero” policy in the western media to train the critical thinking of information screening.

Understanding Contemporary China, as a vehicle for university English Civics, has three unique advantages. Firstly, the original integration of political thinking elements and language materials, such as the translation training of terms like “Chinese modernization”, simultaneously completes the transformation of political discourse and the cultivation of road self-confidence. Secondly, the teaching objectives are accurately aligned with the needs of talents in international organizations, such as the simulated speech task of the United Nations designed in Unit 11. Thirdly, all cases are validated by the Central Academy of Party History and Literature to ensure the transmission of values without deviation.

2.2. Curriculum Civics Case Mining

(1) Principles of excavation

When excavating the Civics and Politics cases, the differences in the educational objectives of the courses, disciplinary attributes and other factors are fully taken into account. When mining Civics cases for Understanding Contemporary China, a series of principles are followed, namely, the principle of seeking truth from facts, the principle of relevance, the principle of synergy, and the principle of importance, which require that Civics cases be screened into the library according to their relevance and importance to the course.

(2) Mining Methods

There are various mining methods for course Civics cases, including classification mining, system mining and mining with the help of informatization tools. Classification mining is to mine Civic-Political cases in a targeted way according to the nature, objectives, characteristics of the courses and their differences among each other. In addition, making full use of informatization tools to excavate Civics cases is also an effective method, which can be carried out with the help of various ideological and political education informatization platforms and typical case retrieval.

(3) Sources of Civic and Political Cases

In this paper, the main sources of mining Civic and Political Cases include course Civic and Political Cases related literature, public online Civic and Political Cases platforms, artificial intelligence large language model generation and various all-media platforms.

(4) Mining results

In this paper, 1,866 Civics cases of Understanding Contemporary China in university English courses and their respective Civics elements are obtained from the curriculum Civics-related literature, publicly available online Civics case platforms, artificial intelligence big language model generation, and all kinds of all-media platforms. In order to improve the quality of the Civics cases, the collected Civics cases of Understanding Contemporary China in university English courses are summarized, and then after a series of data In order to improve the quality of the Civics cases, after summarizing the collected Civics cases of Understanding Contemporary China, the collected Civics cases of Understanding Contemporary China in College English Program were screened out after a series of data cleansing, including removing nulls, sifting out duplicates and irrelevant contents, correcting clause phrases and spelling errors, etc., and finally 1,250 high-quality Civics cases of Understanding Contemporary China in College English Program were screened.

2.3. Automatic Case Classification Model

The above analyzes the reasons for the construction of the Civics Case Bank for the Understanding Contemporary China college English course, describes the principles, methods, sources, and mining results of the Civics Cases, and completes the determination of the relationship between the Civics Cases and the Civics elements they contain after the Civics Cases collection is completed. In order to further expand the Civics case base of the AI course in the future, and to meet the demand of not having to manually label the data mechanically, this subsection constructs an automatic classification model of Civics cases of the Understanding Contemporary China college English course using BERT, BiLSTM, and CRF, so that the classification of Civics cases can be completed automatically when more Civics cases are acquired in the future.

(1) BERT

BERT is composed of a two-way Transformer model, and the structure of BERT is shown in Fig. 1. BERT is a two-phase model firstly, it is a pre-training task on a large number of datasets, and the BERT pre-training is using the two strategies of MLM and NSP, by which the distributed representations at the word and sentence level can be obtained. The second phase of the BERT task is to fine-tune by solving downstream tasks.

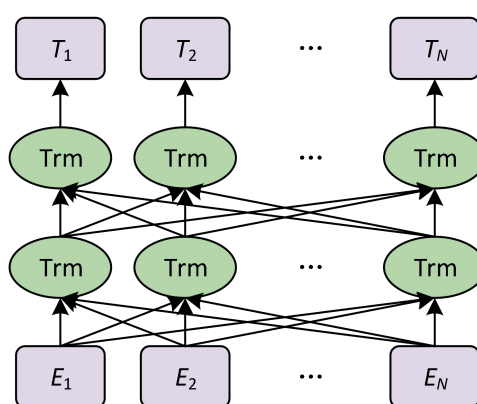


Figure 1. BERT structure

a) Input representation

The input of BERT is shown in Fig. 2, and it can be seen that the input of BERT is obtained by summing the three embeddings: coding vector, segment embedding and position embedding. The word embeddings are fixed dimensional vectors queried from a vector table, the position embeddings are positional features added because the self-attentive mechanism used by BERT is not capable of distinguishing the position of words, and the segment embeddings are added to deal with the task of categorizing sentence pairs.

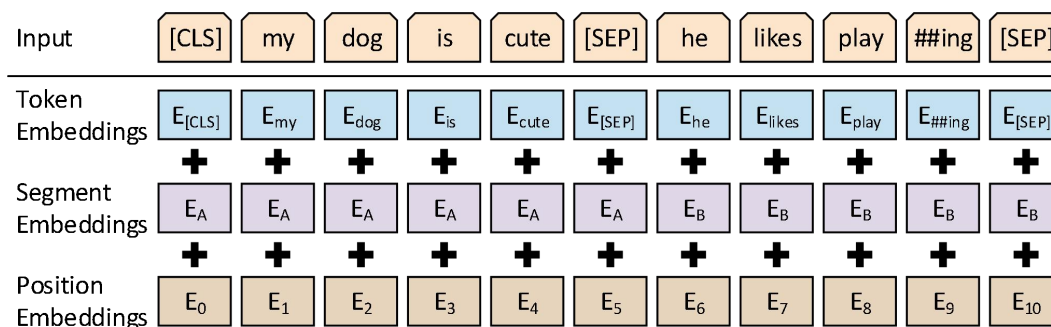


Figure 2. The input of BERT

b) Pre-training tasks

BERT has two pre-training tasks MLM and NSP, through MLM model BERT can utilize bi-directional language model for pre-training and NSP can obtain sentence level semantic representations.

c) Fine-tuning

After pre-training of BERT, the distributed representation of words can be obtained. Fine-tuning of BERT model can be used for sentence pair based classification task, individual sentence based classification task, question and answer task, named entity recognition.

(2) BiLSTM

The structure of LSTM model is shown in Fig. 3, which has a repetitive structure consisting of four layers of neural network. The input word X_t at moment t is input from the bottom of the graph, the line representing the cell state is located at the top of the graph, C_t is the updated cell state, \tilde{C}_t is the temporary cell state, and h_t is the state of the hidden layer. The LSTM model has three gates which are the forgetting gate, the remembering gate, and the outputting gate respectively, and the representations of these three gates are f_t , i_t , o_t . The computational process of LSTM is these three gates through interaction, these three gates decide the deletion and addition of information and the content of the output through the inputs to the hidden layer state of the previous moment and the current moment. Figure 3 shows the input words X_{t-1}, X_t, X_{t+1} and their outputs h_{t-1}, h_t, h_{t+1} for the three moments $t-1, t, t+1$, which have the same structure.

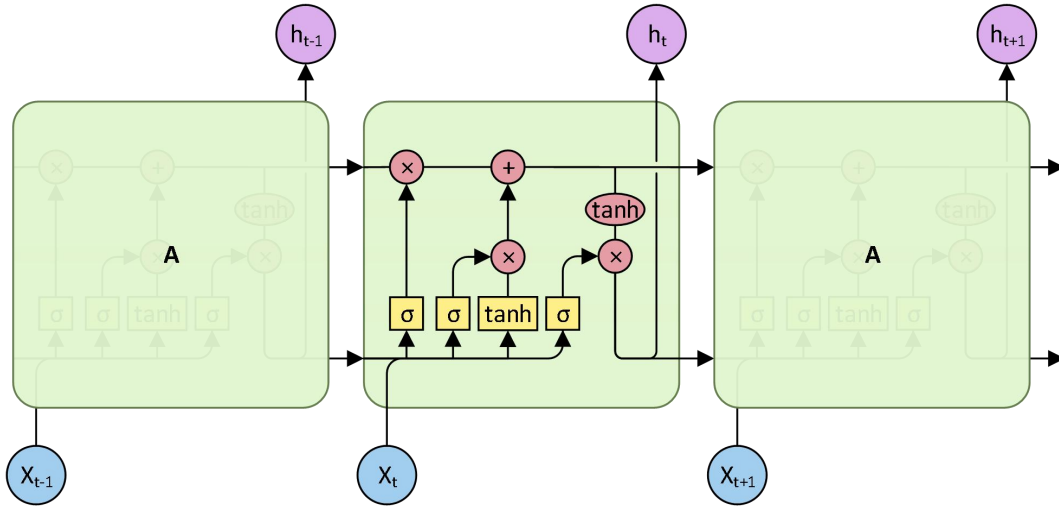


Figure 3. LSTM model

The sigmoid neural network layer converts the input values to output numbers between 0 and 1, and the tanh layer converts the input values to numbers between -1 and 1. These two functions are shown below:

$$s(x) = \frac{1}{1 + e^{-x}} \quad (1)$$

$$\tanh x = \frac{e^x - e^{-x}}{e^x + e^{-x}} \quad (2)$$

Computing the forgetting gate: the output f_t of the layer is obtained mainly through the sigmoid layer using the hidden layer state h_{t-1} at the previous moment and the input word X_t at the current moment. I.e.:

$$f_t = \sigma(W_f \cdot [h_{t-1}, x_t] + b_f) \quad (3)$$

Computational memory gate: divided into two parts, both of which utilize the hidden layer state h_{t-1} of the previous moment and the input word X_t of the current moment. The first part sigmoid layer decides what to update and marks the output as i_t . The second part uses the tanh layer to get the temporary state of the cell \tilde{C}_t . I.e.:

$$i_t = \sigma(W_i \cdot [h_{t-1}, x_t] + b_i) \quad (4)$$

$$\tilde{C}_t = \tanh(W_c \cdot [h_{t-1}, x_t] + b_c) \quad (5)$$

Calculate the cell state at the current moment: the following vectors f_t , C_{t-1} , i_t , \tilde{C}_t are needed. The cell state C_t at the current moment is obtained by linear operations. The * sign in the formula indicates that the dot product operation is performed. I.e.:

$$C_t = f_t * C_{t-1} + i_t * \tilde{C}_t \quad (6)$$

Calculate the value of the output gate: use the sigmoid layer to obtain the value of the output gate o_t using the hidden layer state h_{t-1} at the previous moment and the input word x_t at the current moment. I.e.:

$$o_t = \sigma(W_o \cdot [h_{t-1}, x_t] + b_o) \quad (7)$$

Current moment hidden layer state: the current moment cell state C_t is obtained by dot-multiplying the output of the tanh layer with the value of the output gate to obtain the hidden layer state h_t . I.e.:

$$h_t = o_t * \tanh(C_t) \quad (8)$$

The LSTM model can obtain long distance information through its complex internal structure. BiLSTM bi-directional long and short term memory neural network, which obtains the bi-directional semantic information of the text from the two ends of the inputs respectively. The BiLSTM model is shown in Fig. 4.

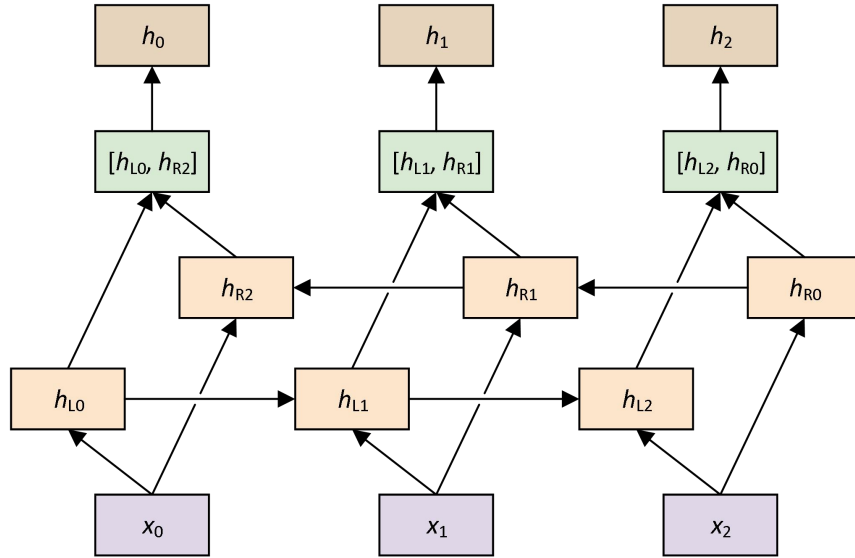


Figure 4. BiLSTM model

In Figure 4, x_0, x_1, x_2 are three vectors input into the Bi-LSTM. For example, these vectors could be "Beijing", "Welcome", and "You". The explanation of the LSTM model has been provided previously. The forward LSTM sequentially inputs "Beijing", "Welcome", and "You" as the inputs for three moments, and through the LSTM, it obtains the hidden layer states $\{h_{L0}, h_{L1}, h_{L2}\}$ for these three moments. The backward LSTM sequentially inputs "You", "Welcome", and "Beijing" as well, and similarly obtains the hidden layer states $\{h_{R0}, h_{R1}, h_{R2}\}$ for these three moments. By merging the hidden layer states from the two different directions, we obtain $\{[h_{L0}, h_{R2}], [h_{L1}, h_{R1}], [h_{L2}, h_{R0}]\}$, and the output of the Bi-LSTM model is $\{h_0, h_1, h_2\}$.

(3) CRF

Let $X = (X_1, X_2, X_3, \dots, X_n)$, and $Y = (Y_1, Y_2, Y_3, \dots, Y_n)$ be both sequences of random variables represented by a linear chain, and if, under the conditions of the given random variable sequence X , the conditional probability distribution $P(Y|X)$ of the sequence of random variables Y constitutes

a conditional random field, i.e., it satisfies Markovianity. That is:

$$P(Y_i | X, Y_1, \dots, Y_{i-1}, Y_{i+1}, \dots, Y_n) = P(Y_i | X, Y_{i-1}, Y_{i+1}) \quad (9)$$

$i=1, 2, \dots, n$, at $i=1$ and n only consider one-sided then call $P(Y|X)$ a linear chain conditional random field, the linear chain conditional random field is shown in Figure 5.

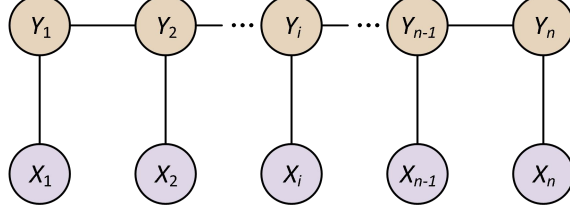


Figure 5. Linear chain components follow the airport

The parameterized form of the linear chain conditional random field is given below: t_k is the transfer characteristic function defined in the context of the Y node with respect to the current and previous nodes; The s_l is a state characterization function defined on the Y node and is only relevant to the current node; The λ_k, μ_l are the weight coefficients corresponding to the two eigenfunctions t_k, s_l ; x, y is the value taken by two sequences of random variables X, Y , i denotes the position of the current node, and k, l denotes the number of two eigenfunctions of the current node. Namely:

$$p(y|x) = \frac{1}{Z(x)} \exp \left(\sum_{i,k} \lambda_k t_k(y_{i-1}, y_i, x, i) + \sum_{i,l} \mu_l s_l(y_i, x, i) \right) \quad (10)$$

where $Z(x)$ is the normalization factor:

$$Z(x) = \sum_y \exp \left(\sum_{i,k} \lambda_k t_k(y_{i-1}, y_i, x, i) + \sum_{i,l} \mu_l s_l(y_i, x, i) \right) \quad (11)$$

Conditional random fields can use contextual features and avoid the labeling bias problem of maximum entropy Markov models. It differs from Hidden Markov and Maximum Entropy models in that both are subject to independence assumptions, whereas Conditional Random Fields removes independence assumptions through the use of complex models.

(4) Mathematical modeling

A BERT-BiLSTM-CRF model for automatic classification of Civics cases in Understanding Contemporary China for university English courses was constructed by introducing BERT into BiLSTM-CRF, and the model structure is shown in Figure 6. The whole model consists of three modules, BERT, Bi-LSTM and CRF. Firstly, the word-sliced text is used to get the word vectors of the words through the BERT model, and then it is input into the BiLSTM-CRF model. The theoretical knowledge involved in these three modules has already been described in detail above, and will not be described in detail here.

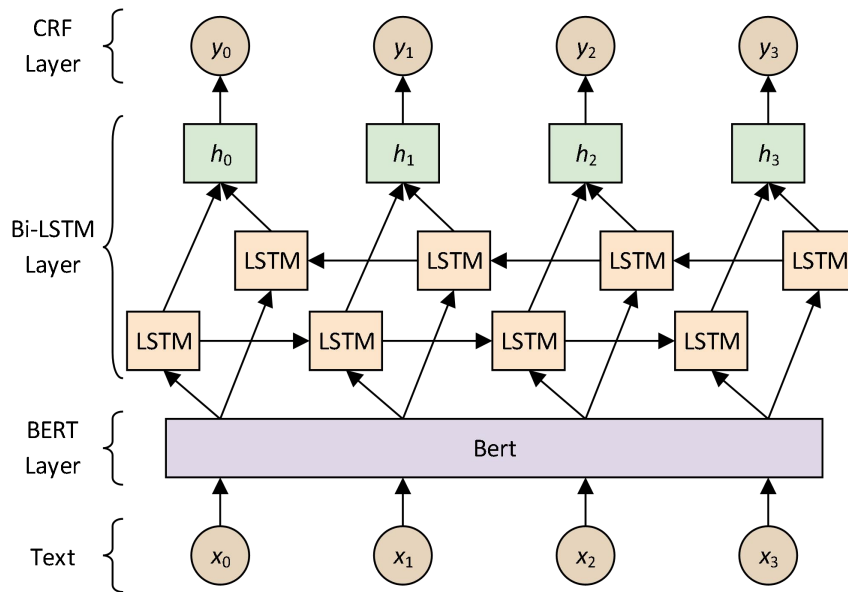


Figure 6. Model Structure

3. Course Civics Case Practices Supported by Blended Learning Models

With the rapid development of Internet technology, the flipped classroom has become a new form of classroom teaching reform in colleges and universities, and the blended learning model has also entered the university classroom. This subsection combines the blended learning model with the Civics Case Bank of Understanding Contemporary China university English course on the basis of the construction of the Civics Case Bank of university English course mentioned above, in order to complete the work of designing the practical path of the Civics Case Bank of Understanding Contemporary China university English course, so as to produce a better teaching effect.

3.1. Teaching evaluation system

The first thing to do is to establish the assessment and evaluation system of the course for the practice of Civic and Political Cases of Understanding Contemporary China in College English Course under Blended Learning Model. Due to the strong theoretical nature, there are more literacy knowledge points, and the offline teaching task is heavy. So the process assessment should be strengthened as follows:

- (1) Several times per semester, such as extracurricular assignments, midterm comprehensive assessment and evaluation and final examination.
- (2) Add quizzes at the beginning of the semester, value-added evaluation at the end of the semester, and comprehensive evaluation of classroom performance.
- (3) Is pre-class knowledge point questioning to test learners' on-line learning as well as pre-study and review.
- (4) It is to take turns in small groups to summarize the overview of the chapter at the end of each chapter lecture to test the mastery of the knowledge of the chapter.

3.2. Classroom Instructional Design

Teachers can use a variety of forms, such as group discussions, book clubs, debates, flipped classroom, etc. Teachers use typical cases in the text as clues to promote the smooth unfolding of the teaching content, in order to consolidate the students' mastery of the knowledge of this chapter. The classroom teaching design is as follows:

- (1) A lesson can be divided into two small lessons, each of which lasts 45 minutes, with a ten-minute break in the middle. The two 90-minute lessons consist of three major parts: teacher's lecture, online learning, and case discussion, and the time allocation ratio is about 3:1:2.
- (2) Teachers' tasks: preparation of videos and cases before the lesson, organization and guidance during the lesson, and reflection on teaching after the lesson.
- (3) Students' tasks: preparation of video materials and pre-study before the lesson, participation in discussion during the lesson, and learning reflection and review after the lesson.
- (4) Each time the blended learning model is implemented, the teacher designs the teaching theme

before class, and then asks students to make material submissions, and the teacher organizes and supplements the students' material submissions according to the students' material submissions, and is able to use the students' material submissions to make online teaching videos to explain the literary history of the course, and the introduction of the authors and works in the course part, and at the same time, through the screening of the text to form a classic case, which will be used for offline teaching and students' discussion to form a complete course of Teaching.

(5) The classroom design is mainly composed of the following links: “course introduction - offline teaching - online learning - case discussion - summary”.

3.3. Case Design

Teachers select excellent case materials from the above established Civic and Political Case Bank of Understanding Contemporary China for college English courses to be typified and used for teaching, and this design is mainly to cultivate comprehensive literacy, cultural understanding, ethical judgment, and language application skills. The specific process is as follows:

(1) Analyze the case, find out the problems to be presented in the case, and guide students to think and discuss.

(2) Discuss the case in small groups. Group members can analyze the problem with the perspective provided by the teacher, or find another perspective, discuss, add, and evaluate each other among group members or between groups, etc. Finally the group refines and summarizes the viewpoints.

(3) The groups summarize the controversial viewpoints. The unresolved controversial viewpoints arising from the process of group discussion are summarized, on the one hand, left to the students to explore and write a small paper after class, on the other hand, under the guidance of the teacher's focus in the classroom by the whole class to discuss together.

(4) IV Conduct the summary and commentary of the viewpoints. In this session, the teacher can not only as a role of summarizing the views of the students, for the views expressed by the students to summarize, refine and amend, in order to facilitate the students to record classroom notes, but also as a role of critiquing the views of the students to comment on the views of the views expressed by the students and comments.

4. Analysis of empirical findings

4.1. Analysis of the process of building a case base for curriculum Civics

(1) Analysis of the Mining Results of Civic Politics in College English Courses

In this paper, 1,866 cases of “Understanding Contemporary China” and their respective Civics elements are obtained from the literature related to curriculum Civics, publicly available online Civics case platforms, AI big language model generation and various all-media platforms. In order to improve the quality of the Civics cases, after a series of data cleaning work, 1,250 high-quality Civics cases of the Understanding Contemporary China college English course were finally screened out, which formed the course Civics information extraction dataset, and the distribution of the dataset is shown in Table 1. There are about 650,000 words in total, containing 11,688 entities as well as 9,237 relationships.

Table 1. Dataset distribution

Relationship name		Quantity	Total
Included		818	9237
Apply ideological and political methods		5216	
Use ideological and political elements		1387	
Achieve ideological and political goals		1816	
Entity category	Entity name	Quantity	Total
Application domain class	Subject school	238	11688
	Professional College	738	
	Course	1836	
	Knowledge points	225	
	Ideological and political methods category	Ideological and political methods	5422
Ideological and political elements category	Ideological and political elements	1405	
Ideological and political goal-oriented category	Ideological and political goals	1824	

The input text length distribution of the dataset is counted, and the input text length distribution statistics are shown in Figure 7. It can be found that the maximum length of the document reaches 350 words, while the shortest document is only 25 words, the length difference between the two is extremely significant, and the number of samples with a length between 100-250 words accounts for 82.7%. The input structure needs to be adjusted according to the length of the dataset in the subsequent training to save training resources.

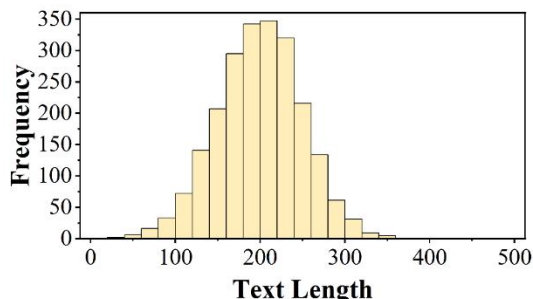


Figure 7. Input the statistics of text length distribution

The distribution of entity types and relationship types are shown in Figures 8 and 9 respectively. It can be observed that among the entity categories, the one with the highest quantity is the "Ideological and Political Method" category, accounting for 46.4%, while the two categories with the lowest quantities are "Academic Institution" and "Knowledge Point", accounting for 2.0% and 1.9% respectively. In the relationship categories, the one with the highest quantity is the "Apply Ideological and Political Method" category, accounting for 56.5%, while the one with the lowest quantity is the "Contains" category, accounting for 8.9%. For both the distribution of entity types and relationship types, there is a phenomenon of category imbalance, which brings more difficulties to the construction of the "Understanding Contemporary China" University English Course Ideological and Political Case Repository. Therefore, an automatic classification model for ideological and political cases in university English courses has been urgently constructed.

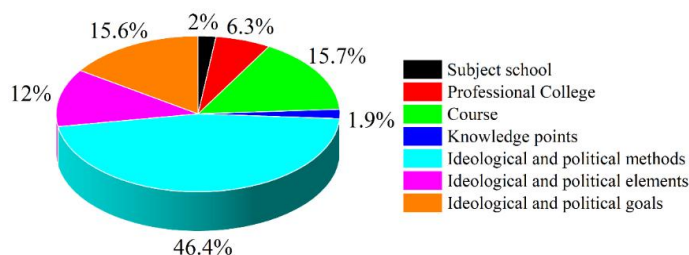


Figure 8. Statistics on the distribution of entity categories in the dataset

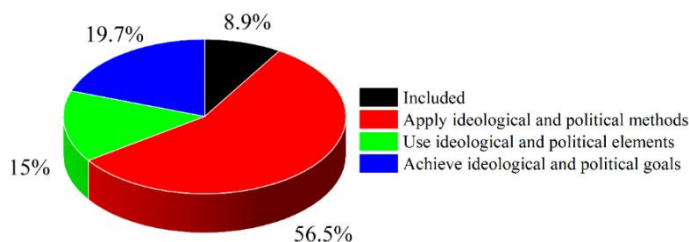


Figure 9. Statistics on the distribution of relationship categories in datasets

(2) Case automatic classification model analysis

The parameters of the model in the experiment are set as follows, the dimension of the input word vector is set to 768 dimensions, the maximum value of the length of the input source text is set to 512, and the encoder of the model uses a 12-layer BERT model encoder with multi-head attention mechanism. The weights are initialized using BERT. 12-layer Transformrt decoding layer with hidden layer dimension set to 3072 dimensions. The number of attention heads is 8 in the multi-head attention mechanism. The batch size was set to 16, Dropout was set to 0.05, weight decay was set to 0.001, and the number of training rounds was 200epoch. With the support of the dataset, the BERT-BiLSTM-CRF

model constructed in the previous section was used to carry out the case classification experiment of Understanding Contemporary China in the Civics and Politics of College English Course, and the case classification results are shown in Table 2. Based on the results in the table, it can be seen that BERT-BiLSTM-CRF achieves excellent performance in the experiments of civic case classification of Understanding Contemporary China in university English courses, i.e., the effectiveness of the automatic categorization model of civic case classification of Understanding Contemporary China in university English courses based on BERT-BiLSTM-CRF is verified. In the face of more English courses, the model can efficiently complete the classification of Civics cases, so that it can better serve the Civics education in university English courses.

Table 2. Case classification results

Category	Precision	Recall	F1-Value
Included	0.916	0.894	0.905
Apply ideological and political methods	0.925	0.898	0.911
Use ideological and political elements	0.899	0.943	0.920
Achieve ideological and political goals	0.888	0.933	0.910
Subject school	0.892	0.889	0.890
Professional College	0.896	0.922	0.909
Course	0.895	0.915	0.905
Knowledge points	0.913	0.946	0.929
Ideological and political methods	0.884	0.937	0.910
Ideological and political elements	0.934	0.885	0.909
Ideological and political goals	0.883	0.932	0.907

4.2. Practical Analysis of Curriculum Civics Cases

(1) Practical Objects

On the basis of the results of the previous study, the blended learning model was combined with the “Understanding Contemporary China” university English course case study library to finalize the task of designing the practice path of the “Understanding Contemporary China” university English course case study library from the perspective of the blended learning model. In order to test the effectiveness of the design, the study selected a school in the South Xinjiang region as the practice base, and took two classes of the 23rd grade English majors of the school as the objects of the study, in which class A was the experimental class with 35 students and class B was the control class with 35 students. During the teaching process, the designed practice path was applied to the experimental class and the unusual teaching method was used for the control class. After the implementation of the teaching, the study conducted an in-depth analysis of the practice path of the course Civics casebook from multiple dimensions, including the students' knowledge mastery and the enhancement of their Civics literacy, and explored whether the students of the experimental class reached effective learning in the Civics teaching classroom, with the aim of providing empirical evidence for the further optimization of the teaching of Civics in the course.

(2) Implementation Process

The implementation program can be divided into three stages, namely, pre-preparation, implementation and application, and summarization and reflection. The details are as follows:

a) Pre-preparation stage

In the pre-preparation stage, the first and foremost task is to get a general understanding of the students' learning situation and daily performance. Observe students' learning habits, knowledge mastery and classroom participation. Immediately after that, we carry out in-depth exchanges with professional teachers, discuss the methods and paths they use in the process of teaching Civics in the curriculum, understand the specific ways in which the teachers integrate the cases of Civics in the curriculum into their professional knowledge, at the same time, understand the difficulties encountered by the teachers in promoting the Civics in the curriculum, and conceptualize the solutions to these problems in advance, in order to build a solid foundation for the subsequent development of high-quality Civics teaching in the curriculum and to ensure the smooth progress of teaching and learning activities. The following are some examples of the ways in which the program has been applied to the teaching of Civics

b) Implementation

In the process of implementation and application of teaching, this study carries out the teaching of curriculum Civics according to the designed practical path. Always adhering to the student-centered teaching concept, with the full use of teaching resources developed in the early stages, the knowledge

of Civics and Politics is skillfully integrated into the teaching content, which is transmitted to students in an intuitive and vivid way. Under the guidance of the blended learning model, the preparation, design, development, implementation and evaluation of teaching are closely connected, and the whole teaching implementation process is finally completed successfully.

c) Summarize and Reflect

In the stage of summarizing and perfecting the teaching results, the teacher first elaborately prepares the post-test questions, which is used to investigate the knowledge mastery of students in the experimental class and the control class, and to deeply analyze the differences in the performance of the two classes. Therefore, in the process of teaching, in addition to focusing on the mastery of what students have learned, it is also necessary to combine it with classroom performance and various scales to provide a comprehensive assessment of students. In addition, this study also analyzed students' academic status and ideological and political quality status more comprehensively through questionnaires. At the same time, the feedback from moral education teachers, classroom teachers and other professional teachers after the teaching practice was widely collected, and the feedback was summarized, analyzed and summarized. In the process of repeated practice and summarization, we continue to improve the practice path of "Understanding Contemporary China" Civic and Political Casebook of College English Course.

(3) Analysis of Practice Effects

a) Analysis of Students' Achievements

At the end of the practice, the experimental class and the control class were tested and the results were analyzed by descriptive statistics using SPSS27.0 software. The results of the descriptive statistical analysis of the results of the experimental class and the control class are shown in Table 3, where EC and CC represent the experimental class and the control class, respectively. According to the data in Table 3, it can be seen that the average scores of the two classes have a certain difference and a large gap.

Table 3. Descriptive statistics of the grades of the EC and the CC

Class	N	Average value	Standard deviation
EC	35	89.8	2.717
CC	35	77.7	3.544

Using SPSS.27.0 software, an independent samples t-test was conducted on the performance of the two classes to determine whether there is a difference in the students' performance after integrating the Civic and Political cases in Understanding Contemporary English university English course using the blended learning model, and the independent samples t-test of the experimental and control classes is shown in Table 4. Based on the performance of the data in the table, it can be seen that the p-value is 0.000, that is to say, it indicates that there is a significant difference between the performance of the experimental class and the control class, which demonstrates that there is a significant effect of integrating the Civic and Political Cases in the Understanding Contemporary English University English Course using the blended learning model.

Table 4. Independent sample t-tests for the experimental class and the control class

Class	N	Average value difference	95% CI difference	Df	P-value
EC	35	12.1	9.015~11.835	72.473	0.002
CC	35				

b) Analysis of questionnaire results

The questionnaire was distributed to 35 students in the experimental class, and finally 35 valid questionnaires were retrieved, and through the reliability and validity test, it can be seen that the Cronbach coefficient is 0.954, which indicates that the questionnaire has a good reliability, and the KMO is 0.903, which indicates that the questionnaire has a good validity. This questionnaire involves the two dimensions of students' knowledge mastery and change in thoughts and feelings respectively, and the results of the analysis of the questionnaire to analyze the degree of change of students in these two dimensions are as follows:

The results of the analysis of students' knowledge mastery are shown in Table 5, 62.86% of the students believe that they can accurately memorize the content contained in the national quality requirements, 68.57% of the students believe that the integration of Civic and Political Education in the teaching process is helpful to the learning of individual professional knowledge, and close to 62.86% of the students relatively agree or very much agree that they can combine their theoretical knowledge with

the actual service scenarios. Through the analysis of the students' knowledge mastery degree, it can be learned that most of the students are basically able to master the knowledge they have learned, which reflects that the learning effect of the students has been greatly improved compared with the previous one.

Table 5. Analysis results of students' mastery of knowledge

No.	Item	Strongly disagree	Disagree	General	Relatively agree	I totally agree
1	I can accurately remember the contents included in the requirements for national quality	0.00%	20.00%	17.14%	34.29%	28.57%
2	I can combine the theoretical knowledge in the course with actual service scenarios	8.57%	14.29%	14.29%	37.14%	25.71%
3	I can repeat the quality requirements mentioned in the course	11.43%	11.43%	14.29%	34.29%	28.57%
4	Integrating ideological and political cases into the teaching process is conducive to the learning of one's professional knowledge	0.00%	20.00%	11.43%	34.29%	34.29%

Finally, a survey was conducted to investigate the change of students' ideology and emotion in the experimental class, and the change of students' ideology and emotion was analyzed as shown in Table 6. According to the statistical data, most of the students agree or relatively agree that through the study of this course, they have a stronger sense of identity with the professional values of "serving others and contributing to the society", and their sense of responsibility has been significantly strengthened, and their understanding of craftsmanship has been more thorough, and their sense of identity with their profession has been improved. These data fully show that the Civic Teaching has been effective in guiding students' emotional development and shaping correct values, and has successfully realized the positive transformation of students at the emotional level.

Table 6. Analysis of Changes in Students' Ideological and Political Emotions

No.	Item	Strongly disagree	Disagree	General	Relatively agree	I totally agree
1	Through the study of this course, I have gained a deeper understanding of the professional values of "serving others and contributing to society"	2.86%	8.57%	11.43%	40.00%	37.14%
2	My sense of responsibility has significantly increased	0.00%	14.29%	5.71%	45.71%	34.29%
3	Through the study of this class, my understanding of the spirit of craftsmanship has become deeper.	2.86%	11.43%	14.29%	42.86%	28.57%
4	My sense of professional identity has improved	0.00%	11.43%	2.86%	42.86%	42.86%

Summarizing the above analysis, the use of the blended learning model combined with the case base for course Civics teaching in Understanding Contemporary China college English course has achieved remarkable results, providing valuable experience and a paradigm for future course Civics teaching practice.

5. Conclusion

Based on the dual theoretical support of the hybrid learning model and the case library of ideological and political courses, this paper designs the practical path of the university English course ideological and political case library of "Understanding Contemporary China" from multiple dimensions, and conducts an empirical exploration and analysis on it. The research results are as follows:

(1) Through the exploration and preprocessing of ideological and political content in university English courses, a total of 1,250 high-quality cases of ideological and political content in the university English course "Understanding Contemporary China" were obtained, including 11,688 entities and 9,237 relationships. On this basis, the BERT-BiLSTM-CRF model was used to conduct a classification experiment on the ideological and political cases of the university English course "Understanding Contemporary China". The values of the three indicators were all above 0.85, indicating that the BERT-BiLSTM-CRF model achieved excellent performance in the classification experiment of

ideological and political cases in the university English course "Understanding Contemporary China", promoting the case library construction to be more in line with the goals of ideological and political education.

(2) The average score of the students in the experimental class was higher than that of the control class, with an average difference of 12.1, and there was a significant difference at the 0.01 level, which indicates that the integration of ideological and political cases in the university English course "Understanding Contemporary China" using the hybrid learning model has a significant effect.

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