



# Evaluation Model of Teaching Quality of College English Integrated into Ideological and Political Course Under Social Network

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**Abstract.** In the process of application, the teaching quality evaluation model of college English integrated ideological and political courses has the problem of low accuracy. Therefore, under the social network, a teaching quality evaluation model of college English integrated ideological and political courses is designed. The consistency characteristics of college English and ideological and political courses are extracted, the teaching quality evaluation index is selected, the role of teachers in a certain learning stage is quantified, and the teaching quality evaluation model is constructed by using social networks. The experimental results show that the evaluation accuracy of the proposed model is higher than that of the other two quality evaluation models.

**Keywords:** Social network · College English · Ideological and political courses · Teaching quality evaluation · Teaching level · Teaching links

## 1 Introduction

The fundamental task of colleges and universities is to cultivate talents to meet the needs of the society, and teaching is the most important means of talent training. In order to better cultivate talents and meet the needs of the increasingly competitive talent market, we must strengthen the management of teaching quality in colleges and universities. The evaluation of teaching quality is an indispensable and effective means in the process of teaching quality management, and is the key to improve teaching quality. The quality of teaching evaluation directly affects the learning efficiency of students and directly reflects the teaching level of teachers. Therefore, how to evaluate teachers' teaching quality objectively and reasonably so as to promote the improvement of teaching quality is one of the important contents of university management. The evaluation of teaching quality is of great significance for improving teaching quality and promoting the standardization and scientization of university management [1]. School leaders and administrators need to adjust teaching quality objectives and make decisions in time based on objective information. Find out the deficiencies in the teaching process, teaching quality evaluation

is a very strict implementation procedure, which can judge the objectivity of information comprehensively and scientifically, so as to help timely adjust the teaching objectives.

The objectives, methods and standards of teaching quality evaluation point out the direction of specific goals for teachers, and can stimulate teachers to actively invest in education reform to the maximum extent [2]. Teachers can exchange teaching experience with each other through the evaluation process, learn the strengths of others and make up for their own shortcomings [3]. The information obtained through the feedback of teaching quality evaluation can help teachers find what they ignore in the teaching process and find their shortcomings. In addition, the evaluation results can also make teachers themselves recognized to a certain extent, and their teaching achievements are affirmed by everyone, which plays an incentive role for teachers.

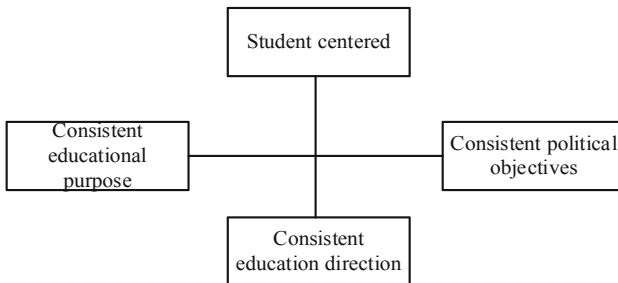
Most universities only do simple average processing for the feedback information of evaluation, the consideration of problems is not comprehensive, so that the evaluation results deviate from the real value. If there may be some irresponsible evaluation in the evaluation of teaching, which will affect the final evaluation results, managers should try to avoid such mistakes in the statistical results. After the evaluation, many schools only tell the teachers the final results of the evaluation, and the specific evaluation results are not timely fed back to the teachers. The teachers cannot understand the shortcomings in their teaching, nor can they improve the teaching level. Therefore, it is necessary to carry out in-depth research on the teaching quality evaluation model of college English integrated into ideological and political courses.

## **2 Construction of Quality Evaluation Model**

### **2.1 Extract the Consistency Characteristics of English and Ideological and Political Courses**

The humanistic and ideological nature of College English provides a necessary condition for universities to integrate ideological and political courses. Language can carry culture, ideology and thought. These factors are only expressed in a certain language. College English teaching should pay attention to cultivating students' awareness of industry cultural knowledge and professional quality contained in professional English knowledge. First of all, both the design of teaching links and the selection of subject textbooks always focus on the topic of moral education. In addition to the five explicit compulsory courses in Colleges and universities, there are also implicit ideological and political courses in the course of Ideological and political education, but the ultimate goal of the course is to cultivate the ideological and moral quality of the educated, so as to promote their all-round development. We should not only focus on imparting College English professional knowledge, but also focus on the goal of knowledge. English teachers have active thoughts and flexible teaching methods. They are also one of the teachers loved by students. Students are more willing to kiss their teachers and believe in their way. Therefore, these factors determine that college English classroom is also an effective place for ideological and political education in addition to the "Two Courses", which provides the possibility for the realization of Ideological and political curriculum. The improvement of the ideological and moral quality of the educated benefits from many factors, including the ideological and moral character of the educator, the infiltration of

teaching methods, the integration of discipline and professional knowledge and ideological and political elements in teaching materials, and so on. However, because higher education takes curriculum as the carrier, only educators flexibly use the penetration function of curriculum can make the educated improve their moral cultivation in the general environment of colleges and universities. Hidden curriculum refers to the general name of various educational elements in school education that can affect students' thought and behavior in addition to explicit curriculum. In the previous traditional "Two Courses", students are not willing to accept the theoretical knowledge blindly preached by ideological and political teachers who are not interested in them. This direct and explicit teaching method can not only cause students' interest and enthusiasm in learning ideological and political courses, but also lead to students' disgust, which is more unfavorable to students' Ideological and political education. At the same time, English courses have more educational contents and themes than other science and engineering courses. Although these themes are expressed in English, the main idea of the content is closely related to the ideological and political content. Therefore, it can be said that college English and ideological and political education are highly consistent in terms of educational objectives. Through the unique function of hint, imitation and assimilation, hidden curriculum can make students unconsciously improve their ideological and moral quality, unknowingly improve their character and establish correct three views. College English is a good carrier of the hidden curriculum of Ideological and political education. Compared with ideological and political courses, College English courses can help students quietly change their thoughts and behaviors without defense, help them establish a correct world outlook, outlook on life and values, and cultivate their professional ethics. Even if the phenomenon of emphasizing knowledge over morality and the marginalization of school moral education is widespread, and even if most college educatees are under the pressure of employment and further study, these difficulties can not become a stumbling block to the ideological and political work of college education. The ultimate goal of higher education is still to grasp both "professional knowledge" and "Ideological and moral character", and the ultimate goal is to promote the educatees to move forward in the direction of all-round development. From this, we can get the consistency characteristics of College English and ideological and political courses, as shown in Fig. 1:



**Fig. 1.** Consistency characteristics of College English and ideological and Political Courses

As can be seen from Fig. 1, the consistency characteristics of College English and ideological and political courses include: student-centered, consistent political objectives, consistent educational direction and consistent educational objectives. College English takes English learning as the medium to help learners understand relevant industry knowledge at home and abroad, be familiar with industry terms and expressions, and master the ability to effectively communicate and solve problems in English under specific scenes. It is not only an extension and supplement of the basic English learning stage, but also lays a foundation for the professional English learning stage. As a compulsory course for college students, ideological and political theory course also has more unique advantages than other basic courses to cultivate the international vision of the educated. In the information age of rapid development, students will inevitably be impacted by bad thoughts. In addition, their own weak ability to identify good and bad cultures can easily be influenced by these bad thoughts [4]. In order to improve such a cultural environment, eliminating bad culture from the source can not solve the fundamental problem. Only by cultivating the correct ability of international vision can we guide us not to be controlled by decadent ideas. At the same time, it is also to meet the actual work needs and personal learning needs in the future. College English courses are humanistic and ideological. English teaching can not be separated from discourse and teach words and grammar directly. There are many humanistic materials in College English teaching content. Therefore, college English, as a basic course, should pay attention to cultivating students' ability to continue learning at work after graduation. Attention should be paid to cultivating students' interest in learning and helping them form good study habits. For college students in the new era, the easiest and most convenient way is through the correct guidance of ideological and political education. Only by comprehensively cultivating college students' correct values and thoroughly understanding China can we see the world from the perspective of China, thus improving the educated's international understanding ability. Ideological and political education always adheres to the principle of basing itself on the national conditions in terms of teaching objectives, teaching features and teaching contents, so that college students can have a profound understanding of the history and present situation of China, thus helping students to accurately understand the value orientation in line with the national conditions of China. Language learning should follow certain rules, starting with simple words and grammar points, and then learning complex texts. We should go from simple to deep. College English teaching should also follow this rule, from simple to complex, and finally help students achieve the ability to solve problems in English in the workplace. This is consistent with the process of ideological and political education.

## 2.2 Selection of Teaching Quality Evaluation Indicators

Scientific and reasonable evaluation index is the basis and premise to ensure the quality of students' evaluation of teaching. The indicators of student evaluation should reflect the internal law of the formation of teaching quality, and should be representative, comprehensive, formative, operable and quantitative. The core of the evaluation indicators should highlight all the emphasis on enhancing the learning effect of students, and fully reflect the principle of student-oriented teaching and teacher-oriented teaching [5, 6]. There should be clear guidance instructions when formulating the evaluation form, and

the part of students' self-evaluation should be added. More qualitative indicators can be set that are conducive to teachers' personality and creativity, and the weight of qualitative indicators and quantitative indicators should be allocated reasonably. The content of the index should be specific and clear, and the degree of differentiation should be high, so that students can better grasp, and according to the type of courses, the evaluation form should be personalized, and try to make the evaluation index simple [7, 8].

From the perspective of the existing teaching level evaluation system, the design of indicators is mainly reflected in the following aspects:

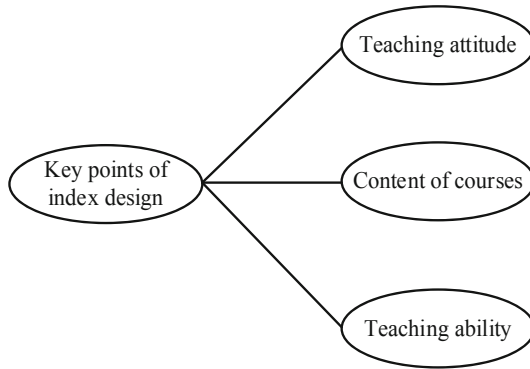


Fig. 2. Key points of index design

As can be seen from Fig. 2, this model combines the evaluation results of these different evaluation subjects and obtains the comprehensive evaluation results for their empowerment. To do the evaluation work well, we must solve two major problems, one is to establish the evaluation index system, the other is to deal with the evaluation results. The following is a specific analysis of these two problems:

(1) Analysis of the evaluation index system

The determination of the evaluation index system is the first step of teaching quality evaluation, and whether the evaluation system is reasonable directly relates to the rationality of the evaluation model. Generally the better evaluation system is determined through the analytic hierarchy process. Firstly, an evaluation table divided into three levels of indicators was obtained through literature review, in which evaluation indicators at all levels were given.

(2) Processing of evaluation results

Effective processing of the evaluation results is the most important step in the evaluation model. Many current models simply calculate the average value of the evaluation results, which will ignore a lot of useful evaluation information. In order to make full use of the evaluation information, this model adopts the interval value fuzzy judgment method to replace the average value method. Firstly, the three-level indicators are evaluated to find out the effective interval of each three-level indicator, and then the effective interval of each second-level indicator is calculated according to its corresponding weight coefficient, and then the effective interval is obtained by further and further. In addition,

because different evaluation subjects have different starting points and angles of evaluation, the effective interval should be calculated for them respectively. Then the effective interval of comprehensive evaluation is obtained according to its corresponding weight, and the final comprehensive evaluation result is determined. Whether it can promote students' positive thinking, whether students' grades are improved, and whether students' mastery of knowledge points is comprehensive. To evaluate teachers fairly and objectively, the key is to establish a standardized and reasonable evaluation index system of curriculum teaching quality. To establish the evaluation index system of curriculum teaching quality, we must adhere to the principles of objectivity, independence, operability and integrity. At the same time, they should have clear learning motivation, full learning motivation and low participation in the classroom. Therefore, students should clarify their career planning and ensure their sufficient learning motivation. Teachers should actively introduce discussion in the classroom to improve students' classroom participation.

In order to evaluate the fairness, objectivity and accuracy of the results, different content index systems are formulated for different evaluation subjects, namely supervision experts, peer teachers and students.

### 2.3 Social Network Building Model

Integrating technical principles of social networks into the process of model construction, first of all, clarifying the purpose of evaluation, which is the guideline of evaluation [9, 10]. Clarify why to evaluate, what aspects of things to evaluate, and what accuracy requirements to evaluate. Define the object system, that is, determine the evaluation object and evaluator. It directly determines the content, mode and method of evaluation. And the factors to be included in the evaluation activities and the relationship between various factors should be determined. Under the condition of known weight vector and input sample, Suppose  $\phi$  represents the weight vector,  $l$  represents the learning rate, the weight adjustment formula is obtained:

$$\phi(l+1) = \frac{\|\phi - \varepsilon\|^2}{\Delta l} \quad (1)$$

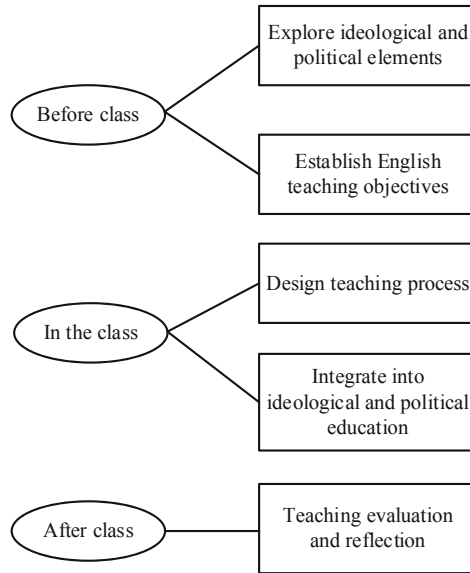
In formula (1),  $\varepsilon$  represents the input sample. Assuming that the goal of neuron weight correction is to minimize the scalar function,  $\gamma$  represents the correction amount at the current moment, then each correction is expected to have:

$$D = \sum \frac{\gamma^2 - \eta}{|l+1|} \quad (2)$$

In formula (2),  $\eta$  represents the gradient vector of  $l$ . The output error square of neuron is obtained:

$$Q(R) = \frac{1}{2} (F - R^T) \times \eta \quad (3)$$

In formula (3),  $F$  represents the original weight of neuron,  $R$  represents the current weight of sample, and  $T$  represents the weight adjustment amount. The teaching design



**Fig. 3.** Schematic diagram of teaching design process

process of the teaching quality evaluation model is described according to the three stages before, during and after class, as shown in Fig. 3:

According to Fig. 3 that the teaching design process of the model:

- (1) Before class: excavate ideological and political elements, establish the goal of English teaching;
- (2) Class: design the teaching process, into the ideological and political education;
- (3) After class: teaching evaluation, reflection.

Reasonably determining the weight is of great significance to evaluation or decision-making, that is, multiple indicators are “synthesized” into a comprehensive evaluation value through a certain mathematical model. Selecting a more appropriate synthesis method is the key link of comprehensive evaluation. Output the evaluation results and explain their meaning, and make decisions according to the evaluation results. The teachers will attend classes in the classroom, and the director of the teaching and Research Office will organize teachers to listen to and communicate with each other. Peer teachers’ evaluation of teaching includes six first-class indicators, the specific contents are: teaching management, teaching content. The different paths of the central node and the long tail node in the communication process of mobile Internet provide a reference for social regulators to effectively control the dissemination of negative information on mobile social networks. The educated are forced by the pressure of entering a higher school and employment. They need to work hard to learn basic knowledge to obtain more certificates and improve the passing rate of English level, which leads to the strengthening of their own learning purpose, which means that the student group has little energy to think about other problems, including how to improve their comprehensive quality.

### 3 Simulation Experiment

In order to verify the validity of the model, a simulation experiment was carried out. The basic reference model [2] and the reference model [3] were selected as the control group, and the model in this paper was selected as the experimental group for the comparative experiment. The evaluation performance of the three models was tested with the same number of samples, as shown below.

**Table 1.** Number of samples 100 model evaluation accuracy (%)

Number of experiments	Reference [2] model	Reference [3] model	Model in this paper
1	55.312	52.131	59.336
2	53.774	54.126	62.005
3	52.017	53.998	61.748
4	51.466	54.812	63.007
5	52.853	53.714	62.555
6	53.847	52.815	63.718
7	52.117	53.606	62.554
8	53.646	52.749	61.949
9	51.842	53.812	62.505
10	52.694	52.123	63.717
11	53.220	54.918	64.285
12	54.916	53.007	65.231
13	52.154	52.114	64.718
14	50.140	53.466	65.912
15	51.206	52.948	66.311

According to Table 1 that the average evaluation accuracy of the College English teaching quality evaluation model and the other two quality evaluation models are 63.303%, 52.747% and 53.356% respectively.

According to Table 2 that the average evaluation accuracy of the College English teaching quality evaluation model and the other two quality evaluation models are 54.118%, 44.184% and 43.983% respectively.

According to Table 3 that the average evaluation accuracy of the College English teaching quality evaluation model and the other two quality evaluation models are 46.453%, 40.127% and 38.099% respectively.

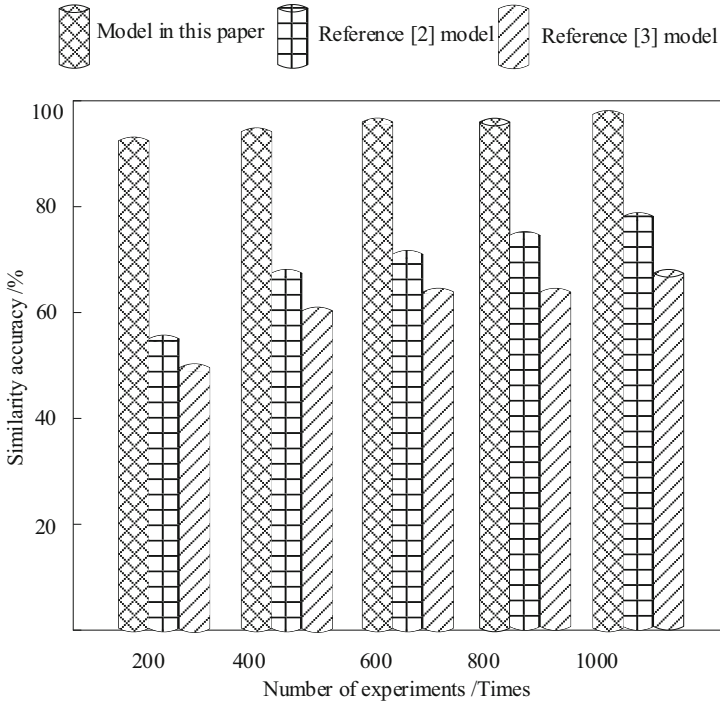
Further verify the above conclusion, that the evaluation accuracy of this model is high, analysis of the model in the implementation process of the similarity calculation indicators, the accuracy of similarity was evaluated by using the model in this paper, the model in reference [2] and the model in reference [3]. The result is shown in Fig. 4:

**Table 2.** Number of samples 200 model evaluation accuracy (%)

Number of experiments	Reference [2] model	Reference [3] model	Model in this paper
1	45.166	42.080	53.644
2	43.718	41.566	52.911
3	45.815	43.788	53.485
4	46.310	45.915	52.977
5	44.619	44.613	56.548
6	42.117	45.718	57.331
7	43.695	44.663	56.748
8	44.506	42.519	57.916
9	43.129	43.878	52.144
10	44.706	42.516	53.646
11	43.819	43.757	52.818
12	45.602	44.909	51.404
13	44.337	45.612	52.619
14	42.005	43.221	53.215
15	43.221	44.997	54.371

**Table 3.** Sample size 300 model evaluation accuracy (%)

Number of experiments	Reference [2] model	Reference [3] model	Model in this paper
1	36.394	35.007	46.123
2	38.515	36.949	45.157
3	39.214	35.212	47.109
4	41.007	39.458	48.209
5	40.649	41.006	44.774
6	42.336	38.575	45.338
7	41.815	39.402	46.157
8	36.878	38.466	45.310
9	38.144	39.157	44.718
10	37.466	36.228	45.122
11	39.979	37.991	46.371
12	41.164	38.231	45.111
13	42.377	37.455	49.122
14	43.845	38.902	48.517
15	42.122	39.452	49.662



**Fig. 4.** Test results of similarity calculation accuracy

According to the analysis results in Fig. 4, the evaluation accuracy of the model in this paper is higher than that of the model in reference [2] and the model in reference [3], both of which are above 95%, which improves the accuracy of the evaluation results, lays the foundation for the completion of the evaluation of the teaching quality of College English integration into Ideological and political courses, and increases the evaluation accuracy.

To sum up, the model studied in this paper is a kind of evaluation model, which can be applied to the determination of all kinds of weights, the model is perfect in the determination of the index system and the processing of the evaluation results, and has been widely used in various fields of real life, such as the evaluation of service quality, the evaluation of excellent students and so on.

## 4 Conclusion

The model constructed in this paper improves the teaching quality evaluation system of theoretical and experimental courses in colleges and universities from the aspects of teachers' quality, teaching contents, attitudes, methods and effects, and makes it more in line with the teaching development of colleges and universities. In addition, on the premise of retaining a large amount of original information, the dimension of the evaluation index is reduced to avoid the influence of the complexity of the network model on the prediction effect. Through the research, the following conclusions are drawn:

- (1) The model has good effect and high precision;
- (2) The similarity calculation accuracy of the constructed model is good, and it has a good evaluation effect, which is of great significance for improving the teaching quality of schools and promoting the communication between teachers and students.

In the future, we can make a more in-depth analysis of the integrity and available value of the model.

## References

1. Xiao, Y., Wang, J.: The evaluation system of online teaching quality in universities: value orientation and construction strategies. *Heilongjiang Res. High. Educ.* **10**, 141–144 (2020)
2. Wang, B., Wu, T., Duan, Y., et al.: Experimental teaching quality evaluation system based on engineering education accreditation. *Res. Exp. Lab.* **39**(5), 149–152, 181 (2020)
3. Wu, N.: Research on teaching quality evaluation under the mixed teaching mode. *J. Hubei Open Vocat. Coll.* **33**(24), 144–145 (2020)
4. Choi, J., Jeon, C.: Cost-based heterogeneous learning framework for real-time spam detection in social networks with expert decisions. *IEEE Access* **29**(7), 103–110 (2021)
5. Derksen, M.E., Kunst, A.E., Murugesu, L., et al.: Smoking cessation among disadvantaged young women during and after pregnancy: exploring the role of social networks. *Midwifery* **98**(98), 7–14 (2021)
6. Song, Q.: Research on the evaluation system of the teaching quality of entrepreneurship-oriented entrepreneurship course. *Continue Educ. Res.* **6**, 82–84 (2020)
7. Xiang, S., Lu, L.A., Aa, A., et al.: ED-SWE: event detection based on scoring and word embedding in online social networks for the internet of people. *Digit. Commun. Netw.* **7**(4), 559–569 (2021)
8. Roozbahani, Z., Rezaeenour, J., Katanforoush, A., et al.: Personalization of the collaborator recommendation system in multi-layer scientific social networks: a case study of ResearchGate. *Exp. Syst.* **39**(5), 1–18 (2021)
9. Wang, Z., Li, P.: Simulation of parallel validation for heterogeneous social network attributes based on string space. *Comput. Simul.* **37**(8), 409–413 (2020)
10. Tang, H., Zeng, J., LI, F., et al.: Point of interest recommendation based on location category and social network. *J. Chongqing Univ. (Nat. Sci. Edn.)* **43**(7), 42–50 (2020)