Effect of College English Education Reform Strategy From the Perspective of Multiculturalism

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The traditional analysis method based on BP neural network cannot effectively analyze the effect of college English education reform at different levels. To this end, an analysis method for the effect of English education reform strategy from the perspective of multiculturalism is proposed. Through diversified network teaching mode of teacher-student interaction, students-machine interaction and student-student interaction, a diversified teaching mode of college English with interactive and dynamic openness is constructed. For the teaching mode, in this paper, AHP and fuzzy theory are used in the constructing of the fuzzy evaluation index system for the effect of college English education reform from six aspects: teaching plan, teaching method, teaching ability, classroom setting, teaching attitude and classroom performance, to realize the analysis of the effect of college English education reform from the perspective of multiculturalism. The experimental results show that the evaluation results of each reform effect by using the proposed method are higher than 95 points, and the analysis effect is good.

Keywords: multiculturalism perspective, college English education, reform strategy, effect analysis, analytic hierarchy process, fuzzy theory

INTRODUCTION

Under the influence of global “economic integration” and “information revolution”, intercultural communication and English learning have become more important. The "Syllabus for College English Course" puts forward new requirements for students' language application ability, such as listening, speaking, reading and writing. It also clearly defines the ability to improve students' intercultural communication in a multicultural context (Malen Rice and Matlach. 2015). Language is the gene of culture, and there is an inseparable relationship between them. Learners will inevitably come into contact with English culture in the process of college English acquisition. English culture will also bring impact to traditional national culture while bringing advanced cultural concepts.

Learning English requires a certain environment and requires the participation of multiple senses (Haapanen and Böckerman 2017). The traditional one-way classroom teaching mode is based on the teacher's classroom teaching. The teaching method of “textbook + blackboard + tape recorder” is difficult to create a real and vivid language environment for cultivating students' communicative competence, which makes it difficult to stimulate students' enthusiasm for learning. Therefore, college English teaching should take advantage of the combination of college English classes, students' language skills and individual differences, make full use of multimedia software and hardware facilities, integrate teaching strategies, and

create a new application learning environment (Anderson and Dixson 2016). The advantages of multimedia technology's image, vividness, reproducibility, advancement and high efficiency are used to transform foreign language teaching from closed and one-way knowledge dissemination to open and multi-directional information dissemination.

Multimedia network classrooms should be the most reasonable product of the two, and play an important role in the multimedia teaching-learning environment in the process of college English teaching. The multimedia network classroom makes full use of today's latest computer network technology and multimedia technology to visualize monotonous and boring classroom knowledge in sound, images, film and television, and animation (Dobbins and Khachatryan 2015). Through the use of computer network technology, it is possible to realize the new multi-diversity teaching model based on multi-dimensional perception, communication and discussion, which can greatly enhance students' awareness of teaching participation and further improve the quality of English teaching.

"The Outline of the National Medium- and Long-Term Education Reform and Development Plan (2010-2020)" clearly proposes to meet the requirements of the country's economic and social opening up, and to cultivate a large number of international talents with international vision, international rules, and ability to participate in international affairs and international competition. (Ro 2016). This is not only the inherent requirement of education for modernization, facing the world, and facing the future, but also poses new challenges and requirements for the current English education and the construction of English teachers in Chinese universities. The starting point of the construction of English education major is to focus on improving the level and quality of the construction of English teachers, and finally adapt to the international development trend of the future society and the educational needs through the reform of the "English + Education" compound talent training model. This paper analyzes the effects of College English education the reform strategy from the perspective of multiculturalism, so as to promote the development of English education and construct the characteristic orientation of English education.

ANALYSIS OF THE EFFECT OF COLLEGE ENGLISH EDUCATION REFORM STRATEGY FROM THE PERSPECTIVE OF MULTICULTURALISM

Diversified and Interactive Multimedia Teaching Mode of College English

The diversified and interactive multimedia teaching mode of college English combines advanced teaching methods to give full play to the advantages of diversification, large capacity and high efficiency of multimedia, the advanced teaching methods. A reasonable interaction core truly realizes the learning and emotional communication between teachers and students, students and students (Rios 2016). Finally, it can construct a diversified network teaching mode of three interactive forms: teacher-student interaction, student-machine interaction, and student-student interaction.

Teacher-student interaction: the interaction between the teacher and the student (Olitsky 2015). Teachers should grasp the best role of the media and the best time to achieve high-quality teaching; it should create, excavate and stimulate students' excitement in stages, and pay attention to the timing of image selection and presentation. Teachers can tell their e-mail addresses to answer, correct, and communicate with students.

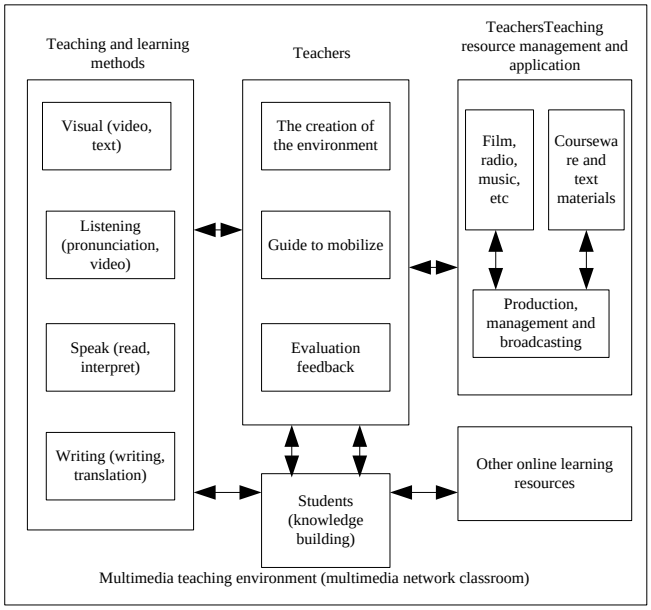
Student-machine interaction: the interaction between students and computers (Morin 2015). As a teaching tool, the computer can present teaching information and receive information about students' answers to questions, and can make judgments and give achievements. Multimedia network teaching provides students with the opportunity to participate directly. Students have the initiative to choose the learning content and methods that meet their actual needs. In the interaction with the computer, students improve their self-confidence and self-test ability, but all depends on the interaction design.

Student-student interaction: the interaction between students and students. Teachers can divide students into groups of 4 or 6 according to the actual teaching needs. They are grouped and discussed under the driving of learning tasks, giving students a chance to review and consolidate their language knowledge and improve their listening and speaking skills, making the interaction in class and after class, promoting students' autonomous learning after class (Karadağ Bektaş and Çoğaltay 2015), so that students focus on

the learning process. Throughout the process, the teacher is only the organizer and the mentor. The time and rhythm of the student's learning activities should be mastered and controlled. It is necessary to ensure that the content of the student-student interaction is related to the topic or language point of the unit, so as to internalize the knowledge. (Mijs 2016).

From the perspective of information dissemination, teaching is a two-way or multi-directional dynamic process in which communicators transmit teaching information through the media. In the multimedia-based teaching mode, multimedia is the carrier of teaching information and the source of information for teaching (Jungblut 2015). In order to transmit information in a timely and efficient manner, organically combine teaching elements, and form a structural model of the interaction of "teacher-multimedia-student", it is necessary to construct a multimedia-based interactive English teaching model with interactive and dynamic openness, based on constructivist learning theory and interaction theory, and guided by multiple principles such as teacher-student interaction, teaching environment optimization, learner-based principles, and multidimensional information input (Hu and Vargas 2015). This mode is shown in Figure 1:

FIGURE 1
BLOCK DIAGRAM OF MULTI-MEDIA INTERACTIVE TEACHING MODE OF COLLEGE ENGLISH



In this model, the whole teaching process is organized, guided and promoted by teachers. Using all kinds of favorable resources in multimedia teaching environment, students' learning situation is created, learning guidance and mobilization are conducted, and information feedback is given through evaluation (Torun and Tumen 2016). Throughout the teaching process, students are the main body of learning. They should use the elements of learning environment such as situation and collaboration to give full play to their enthusiasm and initiative. Students will gradually complete the meaning construction of knowledge in the process of interaction with teachers. Throughout the teaching process (Seeber Lepori and Agasisti 2017), the teaching and learning methods used include: vision (film and text, etc.), listening (audio files and audio, etc.), speaking (reading and interpreting, the main way of interaction) and writing (writing and translation, etc.) (Koning Webbink and Martin 2015).

Analysis Method of College English Education Reform Strategy based on AHP (Analytic Hierarchy Process) and Fuzzy Evaluation

Establishment of an Evaluation Index System

In view of the above diversified English teaching model, according to the AHP method, six primary evaluation indicators and 16 secondary evaluation indicators are used to form evaluation system from the perspectives of teaching plans, teaching methods, teaching ability, classroom setting, teaching attitude and classroom performance (Osagie Wesselink and Blok 2015). The evaluation index system formed is shown in Table 1.

TABLE 1
EFFECT EVALUATION OF COURSE TEACHING REFORM AND ITS WEIGHT

Composite indicator	The evaluation index	The weight
A Teaching plan(0.109)	a1 Develop a reasonable and scientific teaching plan	0.474
	a2 Adjust the teaching plan timely to ensure timely completion	0.526
B Teaching assistant(0.156)	b1 Effective use of multimedia presentation	0.213
	b2 Help students to expand their horizons and inspire teaching	0.321
	b3 Pay attention to the comprehensive improvement of students' listening, speaking, reading and writing ability	0.285
	b4 Detailed explanation, simple and simple, many examples	0.181
C Teaching ability(0.165)	c English phonetic standard, fluent language, key lecture Prominent and well organized	1
D Classroom setting(0.202)	d1 The content is in line with the syllabus	0.217
	d2 Lectures are reasonably informative	0.285
	d3 Teaching content is healthy and positive	0.246
	d4 Complete course structure design	0.252
E Teaching learning attitude(0.202)	e1 The teaching is fully prepared and the teaching plan is demonstrated skillfully	0.183
	e2 Strictly manage classroom discipline	0.128
	e3 Treat students kindly and sincerely	0.21
	e4 Give timely feedback to students' performance in class Encourage less criticism	0.174
	e5 Answer students' questions carefully	0.199
	e6 Class time arrangement is reasonable, not late, not late	0.106
F Class performance(0.166)	f1 The students answered the questions actively	0.429
	f2 The group discussion was lively and lively	0.571

(Note: the distribution of weights in the table is determined by the analytic hierarchy process)

Index Weight Solution

Firstly, the evaluation object set is determined as $P =$ evaluation of the effectiveness of the English curriculum reform (Schauber Hecht and Nouns 2015); Secondly, the evaluation factor set $u = \{u_1, u_2, \dots, \mathrm{u}_6\}$ teaching attitude, teaching methods, teaching ability, teaching content, teaching quality, classroom performance } is constructed; Finally, the evaluation level domain is determined to establish the evaluation set $v.v = \{v_1, v_2, \dots, v_4\} =$ { excellent, good, general, poor }, where, good: $100 \geq V \geq 80$; good: $80 > V \geq 70$; general: $70 > V \geq 60$; poor: $V < 60$.

Calculation of the Weight of the First-Level Indicator. Six first-level indicator factor weights are obtained by using the analytic hierarchy process (HerbelEisenmann Wagner and Johnson 2015). The judgment matrix $S = \left(u_{ij}\right)_{p\times p}$ is constructed as shown in equation (1):

$$S = \begin{bmatrix} 1 & \frac{4}{3} & \frac{5}{4} & 1 & \frac{9}{5} & \frac{6}{5} \\ \frac{3}{4} & 1 & \frac{9}{10} & \frac{8}{9} & \frac{7}{5} & \frac{8}{9} \\ \frac{4}{5} & \frac{10}{9} & 1 & \frac{4}{5} & \frac{3}{2} & 1 \\ 1 & \frac{9}{8} & \frac{5}{4} & 1 & 2 & \frac{5}{4} \\ \frac{5}{9} & \frac{5}{7} & \frac{2}{3} & \frac{1}{2} & 1 & \frac{4}{6} \\ \frac{5}{6} & \frac{9}{8} & 1 & \frac{4}{5} & \frac{6}{4} & 1 \end{bmatrix} \tag{1}$$

The maximum eigenvalue of the judgment matrix S is calculated by Mathematica software to obtain $\lambda_{\max} = 6.00589$. To test the consistency of the judgment matrix (Tala and Vesterinen 2015), the consistency indicator needs to be calculated:

$$CI = \frac{\lambda_{\max} - n}{n-1} = \frac{6.00589-6}{6-1} = 0.001178 \tag{2}$$

The average random consistency indicator $RI = 1.24$. The random consistency ratio is:

$$CR = \frac{CI}{RI} = \frac{0.001178}{1.24} = 0.00095 < 0.10 \tag{3}$$

Therefore, it is considered that the results of hierarchical analysis are consistent (Gondwe and Longnecker 2015), that is, the distribution of weight coefficients is very reasonable, and its corresponding feature vector is $A_0 = (1.21372, 0.935715, 0.9911, 1.21138, 0.634379, 1.0)$, and then is normalized as: $A = (0.202, 0.156, 0.165, 0.202, 0.109, 0.166)$.

Calculation of the Weight of the Second-Level Indicator. In the same way, each of the two indicators is constructed with its own judgment matrix, and the maximum eigenvalue and consistency test (Li Wei and Liu 2015) are calculated by Mathematica software to obtain a reasonable weight coefficient.

The eigenvectors of the six indicators' weight of teaching attitude (Wu Xia and Zhang 2015) are (1.72669,1.202273,1.97838,1.64237,1.87338,1.0) and are normalized as: (0.183,0.128,0.210,0.174, 0.199,0.106); The weights of teaching method indicators are: (0.213,0.321,0.285,0.181); the weights of teaching content indicators are: (0.217,0.285,0.246,0.252); the weights of teaching quality indicators are: (0.474,0.526); the weights of classroom performance indicators are: (0.429,0.571).

Multi-Level Fuzzy Comprehensive Evaluation of English Education Reform Effect. Using the fuzzy synthesis operator of weighted average $M(\square,),,AandR$ are combined to obtain the fuzzy comprehensive evaluation result vector B. The calculation equation is:

$$b_i = \sum_{i=1}^{p}(a_i \ulcorner r_{ij}) = \min(1, \sum_{i=1}^{p} a_i \ulcorner r_{ij}), j = 1,2, \ldots, m \quad (4)$$

In the equation (4), b_i, a_i, and r_{ij} are the membership degrees belonging to the j-th level, the weight of the i-th evaluation index, and the membership degree of the i-th evaluation index belonging to the j-th level, respectively. Using the comments given by the expert group to the class (Guo Zhu and Wang 2015), the fuzzy matrix R from the secondary indicators to the comment set is obtained.

The evaluation vector of teaching attitude is calculated as: $A_1 = a \square R$

$$= (0.183,0.128,0.210,0.174,0.199,0.106) = \begin{pmatrix} 0.154 & 0.404 & 0.410 & 0.032 \\ 0.006 & 0.272 & 0.500 & 0.223 \\ 0.053 & 0.756 & 0.191 & 0.000 \\ 0.107 & 0.368 & 0.354 & 0.170 \\ 0.373 & 0.408 & 0.189 & 0.030 \\ 0.164 & 0.436 & 0.313 & 0.087 \end{pmatrix}$$

The normalized $= (0.150309,0.458948,0.311525,0.079172)$ comprehensive evaluation vector is: $A_1 = (0.150,0.459,0.312,0.079)$.

Similarly, the evaluation vector of teaching method is $B_1 = (0.084,0.226,0.499,0.197)$; the teaching ability evaluation vector is $C_1 = (0.035,0.370,0.511,0.084)$; the teaching content evaluation vector is $D_1 = (0.032,0.279,0.501,0.188)$; the teaching quality evaluation vector is $E_1 = (0.027,0.300,0.496,0.177)$; the comprehensive evaluation vector of course teaching reform effect is A' $(0.057,0.318,0.458,0.167)$.

RESULTS

In order to verify the effectiveness of this method in the evaluation of English education reform strategy, this paper applies the method to the effect analysis of English education reform strategy in a university, and issues questionnaires to 198 students of English majors in 2014 and 2015. A total of 198 questionnaires are sent out, 192 questionnaires are returned, and 192 questionnaires are valid. The statistical results of the questionnaires are shown in Table 2:

TABLE 2
QUESTIONNAIRE SURVEY RESULTS STATISTICS

Secondary factor code	Very good		good		general		poor	
	The number of	The percentage	The number of	The percentage	The number of	The percentage	The number of	The percentage
U_{11}	138	71.9	40	20.8	10	5.2	4	2.1
U_{12}	140	72.9	36	18.8	11	5.7	5	2.6
U_{13}	130	67.7	45	23.4	12	6.3	5	2.6
U_{21}	178	92.7	10	5.2	2	1.0	2	1.0
U_{22}	176	91.7	13	6.8	2	1.0	1	0.5
U_{23}	180	93.8	11	5.7	1	0.5	0	0
U_{31}	164	85.4	10	5.2	8	4.2	4	2.1
U_{32}	170	88.5	10	5.2	8	4.2	4	2.1

U_{33}	150	78.1	25	13.0	9	4.7	8	4.2
U_{41}	171	89.1	15	7.8	4	2.1	2	1.0
U_{42}	165	85.9	16	8.3	7	3.7	4	2.1
U_{43}	148	77.0	24	12.5	12	6.3	8	4.2
U_{44}	152	79.2	24	12.5	10	5.2	6	3.1
U_{51}	158	82.3	26	13.5	6	3.1	2	1.0
U_{52}	148	77.0	30.	15.7	10	5.2	4	2.1
U_{53}	142	74.0	36	18.7	8	4.2	6	3.1

It can be seen from Table 2 that the evaluation process and results of the first-level fuzzy comprehensive evaluation are as follows:

$$B_{U_1} = A_{U_{li}} \cdot R_{U_{li}} = \{0.191,0.263,0.546\}\begin{bmatrix}71.9\% & 20.8\% & 5.2\% & 2.1\%\\ 72.9\% & 18.8\% & 5.7\% & 2.6\%\\ 67.7\% & 23.4\% & 6.3\% & 2.6\%\end{bmatrix}$$
$$= \{0.699,0.217,0.059,0.025\}$$

In the same way:
$B_{U_2} = A_{U_{2i}} \cdot R_{U_{2i}} = \{0.928,0.059,0.008,0.005\}$;
$B_{U_3} = A_{U_{3i}} \cdot R_{U_{3i}} = \{0.852,0.091,0.033,0.024\}$;
$B_{U_4} = A_{U_4} \cdot R_{U_{4i}} = \{0.820,0.106,0.046,0.028\}$;
$B_{U_5} = A_{U_{5i}} \cdot R_{U_{5i}} = \{0.785,0.154,0.042,0.019\}$

According to the results, the fuzzy matrix of the second-level comprehensive evaluation of the factor set U is:

$$R = \begin{bmatrix}0.699 & 0.217 & 0.259 & 0.025\\ 0.928 & 0.059 & 0.008 & 0.005\\ 0.852 & 0.091 & 0.033 & 0.024\\ 0.820 & 0.106 & 0.046 & 0.028\\ 0.785 & 0.154 & 0.0042 & 0.019\end{bmatrix} \quad (5)$$

Then, the results of the second-level fuzzy comprehensive evaluation are:

$$B = A \cdot R = \{0.093,0.136,0.121,0.302,0.348\} \cdot \begin{bmatrix}0.699 & 0.217 & 0.059 & 0.025\\ 0.928 & 0.059 & 0.008 & 0.005\\ 0.852 & 0.091 & 0.033 & 0.024\\ 0.820 & 0.106 & 0.046 & 0.028\\ 0.785 & 0.154 & 0.0042 & 0.019\end{bmatrix} \quad (6)$$

According to the principle of maximum membership degree, $b_1 = \max B = 0.8151$, the comprehensive evaluation result of the second-level fuzzy data is V_1 : very good, indicating that the reform effect of the proposed method is better, and the degree of acceptance of students is high, which is worth further promotion; The results of the first-level fuzzy comprehensive evaluation show that the "very good" rating score in B_{U_1} is 0.699. It can be seen that the preliminary work in the English education reform needs to be further strengthened, and the scores of "very good" grades of | B_{U_2} and B_{U_3} are better, reaching 0.928 and 0.852. It can be explained that the method of this paper overcomes the subjective arbitrariness in the

analysis of the effect of College English education reform from the perspective of diversification, and transforms the qualitative evaluation into the quantitative evaluation, thus making the evaluation results of College English education reform strategy more objective and accurate.

The experiment analyzes the effectiveness of English education reform from time-consuming to verify the efficiency of the method. The traditional effect analysis method of English education reform strategy uses BP neural network to analyze the effect of English education reform strategy, while the effect analysis method of college English education reform strategy uses SPSS method to achieve the evaluation of English education reform effect. In the experiment, three methods are used to analyze the results of English education reform in 15 universities in the south of China from the perspective of diversification, and the time record is analyzed and the results are described in Table 3.

TABLE 3
ANALYSIS OF THE EFFECTS OF THE ENGLISH REFORM STRATEGIES OF THE THREE METHODS(S)

Number of colleges and universities	In this paper, methods	The effect analysis method of education reform strategy based on BP neural network	Effect analysis method of education reform in college English based on SPSS analysis
1	2.5	8.5	6.5
2	3.2	8.6	5.8
3	2.8	8.4	6.3
4	3.0	8.2	6.4
5	2.6	8.3	6.7
6	2.8	5.8	6.5
7	2.4	7.6	6.3
8	2.6	9.5	6.1
9	2.5	6.5	6.5
10	2.6	8.4	6.4
11	2.5	7.5	6.7
12	2.8	8.6	5.9
13	2.6	8.6	6.3
14	2.4	8.8	6.4
15	2.9	7.5	6.7
Average	2.7	8.1	6.4

From the analysis of the three methods in Table 3, it can be seen that the proposed method can quickly complete the analysis of English education reform effect, the average analysis time is 2.7s. While analyzing the average time consumption of the traditional effect analysis method of English education reform strategy

based on BP neural network and the method based on SPSS can be seen that the average time spent on the two methods is 8.1 and 6.4s respectively. The time-consuming time consumption is far beyond that of the proposed method, indicating that the proposed method is effective of the college English education reform strategy.

In the experiment, in order to highlight the effectiveness of this method in the analysis of the effect of English education reform strategy, the traditional effect analysis method of English education reform strategy based on BP neural network is compared with the method of this paper. Using the method of expert evaluation, this paper evaluates English teaching plan, teaching means, teaching ability, classroom setting, teaching attitude and classroom performance from six perspectives. The evaluation results of the proposed method and the traditional BP neural network-based method are described by Table 4 and Table 5 respectively:

TABLE 4
EXPERT EVALUATION RESULTS OF THE METHOD IN THIS PAPER (SCORE)

Expert number	Teaching planning	Teaching means	Teaching ability	Classroom setting	Teaching attitude	Classroom performance
1	95.6	95.2	96.4	96.3	95.6	96.5
2	96.2	96.3	93.6	94.2	94.3	94.6
3	95.6	94.5	95.7	95.3	96.1	92.5
4	94.2	96.2	94.2	96.5	97.2	95.6
5	96.2	94.8	94.8	97.4	95.7	96.5
6	97.2	97.2	95.6	95.6	96.8	94.5
7	96.5	95.6	96.2	93.5	96.8	93.5
8	94.6	94.3	94.6	96.4	94.5	97.2
9	93.4	96.2	92.5	95.3	92.6	96.2
10	93.8	95.4	97.5	97.2	92.6	94.5
11	95.8	96.2	96.3	96.2	92.4	96.2
12	94.6	94.6	94.6	94.6	93.5	96.1
13	97.6	97.5	96.5	96.2	94.6	97.2
14	94.5	93.6	94.6	94.6	96.4	97.3
15	96.3	95.6	98.2	92.6	95.9	95.8
average	95.5	95.5	95.4	95.4	95.0	95.6

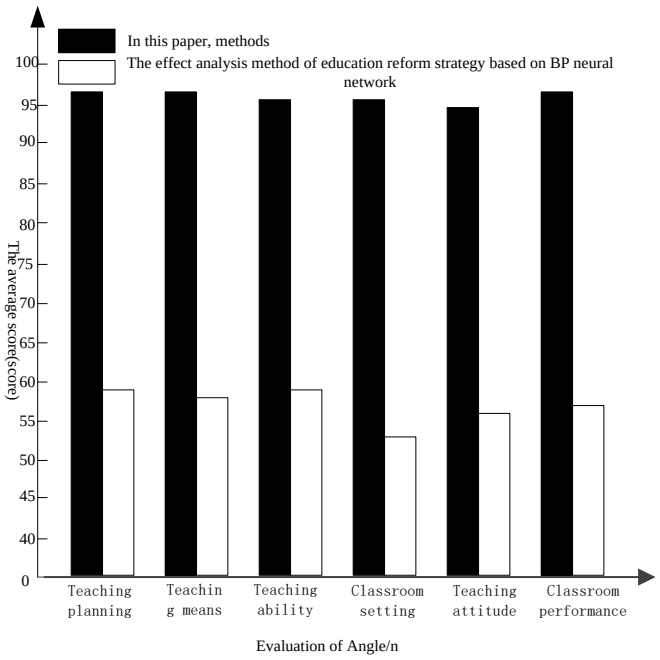
Analysis of the data in Table 4 shows that the evaluation results of the proposed method are high. The scores of the English teaching plan developed by the proposed method can be seen that the scores of the experts are higher than 90 points and the average score is 95.5 points. It is concluded that the average evaluation scores of the teaching methods, teaching ability, classroom setting, teaching attitude and classroom performance of the proposed method are 95.5 points, 95.4 points, 95.4 points, 95.0 points and 95.6 points respectively. The evaluation results of proposed method for the English education reform strategy is compared with that of the traditional effect analysis method based on BP neural network. The results are shown in Figure 2:

TABLE 5
EVALUATION RESULTS OF EXPERTS ON EFFECT ANALYSIS OF TRADITIONAL EDUCATION REFORM STRATEGY BASED ON BP NEURAL NETWORK (SCORE)

Expert number	Teaching planning	Teaching means	Teaching ability	Classroom setting	Teaching attitude	Classroom performance
1	56.8	58.6	56.3	52.5	68.5	61.2
2	58.3	54.3	52.3	52.3	53.6	56.3
3	53.6	62.3	62.3	53.2	56.2	58.6
4	56.5	60.5	55.8	51.2	54.6	57.2
5	60.3	55.6	57.6	54.6	53.2	55.6
6	62.5	56.3	62.5	53.2	56.1	54.6
7	57.5	58.3	63.4	54.1	55.2	58.6
8	64.6	53.6	62.5	53.8	57.3	56.2
9	58.6	60.5	61.4	53.7	52.6	54.3
10	62.3	61.5	64.6	53.6	54.6	57.6
11	56.8	63.5	57.8	55.2	55.2	54.2
12	60.3	58.6	54.6	54.6	56.3	53.2
13	57.3	57.9	53.6	53.4	54.6	54.6
14	63.0	56.9	54.2	54.6	52.8	58.7
15	58.4	62.4	63.5	56.2	56.7	56.2
average	59.1	58.7	58.8	53.7	55.8	56.5

From the data in Table 5, it can be concluded that the experts have low evaluation scores on the traditional effect analysis method based on BP neural network for English education reform strategy. Experts scored 59.1 points, 58.7 points, 58.8 points, 53.7 points, 55.8 points and 56.5 points respectively on the formulation of English teaching plan, teaching methods, teaching ability, classroom setting, teaching attitude and classroom performance, and the scores are far lower than those of the proposed method.

FIGURE 2
EXPERT EVALUATION RESULTS OF THE TWO METHODS (SCORE)



From Figure 2, it can be clearly seen that the expert evaluation results of the effect evaluation index by using the proposed method are much higher than that of the traditional analysis method based on BP neural network for English education reform strategy effect, which shows that the proposed method is effective in the evaluation and analysis of the actual English education reform strategy, and can be used in a wide range of areas to promote the development of English education and other courses.

DISCUSSION

In response to the research content of this paper, several suggestions for future English education reform are proposed:

(1) Based on the advantages of English disciplines, the characteristic direction of professional construction is realized

The foundation of English subject is consolidated, to improve the effectiveness of English courses in the process of English major construction, and emphasize the transition from ontological professional knowledge system to conditional knowledge system. On the basis of systematically improving the construction of English majors, the construction of educational disciplines is strengthened, to gradually realize the construction of English education majors. The focus of the undergraduate stage is the systematic improvement of English professionalism. The optimization of the course structure should focus on completing the three course modules in stages, namely the English course module, the education course module and the education course module. The three course modules cross each other and merge to form the professional connotation of English education; the focus of the master's degree is to upgrade the system of education professional literacy, emphasizing the continuity and practicality of the curriculum, realizing the academic orientation and professional orientation of the construction of educational majors. The former is mainly for the academic master's degree construction of foreign language teacher education and foreign language curriculum and teaching theory. The latter focuses on the professional construction of the Master of Education (discipline teaching and English), thus achieving a high-level and integrated construction of the English education major.

(2) System development of English education specialty courses

The system develops the pre-service education curriculum of English teachers as a breakthrough, promotes the organic integration of the advantages and characteristics of English education, and realizes the coordinated development of "English + Education". We need to start from the aspects of concept, goal, content, design, implementation and evaluation to conduct research on the teaching plan, curriculum and teaching methods of English teachers at home and abroad, formulate curriculum standards and syllabus for featured courses, establish the characteristic curriculum development team, develop the characteristic curriculum resources development, and seek the pertinent teaching strategy. The systematic development of English education specialty courses should firstly be based on the professional advantages of English subjects, and integrate relevant educational subject content into English courses and teaching (such as reading, translation, writing and listening and speaking courses), so that students can enhance their English skills and pay more attention to the relevant contents of education subjects; secondly, the "fine processing" of the educational subject content enables students to master the basic educational theories, comprehend the classical educational thoughts, and pay attention to the frontier dynamics of educational research. This reflects the elementary, application and cutting-edge nature of the discipline of education.

(3) Cooperation and win-win between practical teaching and scientific research base construction

The construction of high-quality practical teaching and scientific research base is an important factor to ensure the quality of English teachers in primary and middle schools, and it is also the key to the training of applied primary and secondary English teachers. The practice teaching and scientific research base construction can not only achieve the cooperation and win-win situation between the university and the primary and secondary school in teaching and research work, but also enable the students to improve their professional quality in the educational practice and introduce the scientific research into the teaching. In practice teaching and research bases, we can select a group of expert teachers and backbone teachers with strong business ability and high scientific research quality as practical guidance teachers for English teachers in primary and middle schools, and establish a long-term effect in practical teaching and scientific research cooperation. The mechanism will make practical teaching and scientific research base construction stronger and stronger. In addition, universities can also provide strong support and assistance for practical teaching and research bases in research guidance, teacher training and business training, jointly plan educational reform research projects, and work together to promote the reform and development of English teacher education in primary and secondary schools, so as to effectively improve the quality and level of specification of English teacher education in primary and secondary schools.

CONCLUSIONS

In this paper, an effectiveness analysis method of college English education reform strategies is proposed in a multi-cultural perspective. Based on the multi-disciplinary interactive multimedia teaching model of college English, by using analytic hierarchy process and fuzzy theory from six aspects of teaching plans, teaching methods, teaching ability, classroom setting, teaching attitude and classroom, the performance of college English education reform is analyzed. It can be concluded from the experimental results that the proposed method can effectively analyze the effect of English reform from different angles, and the results of expert evaluation are high, which can be used to analyze the reform effects of other disciplines.

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