Action Research on Mobile Business English Teaching Model from the Perspective of Cooperation

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Abstract: Action research method is one of the commonly used methods to assist teachers in teaching. The traditional action research method only conducts research according to the statistical results of data, while the teaching mode optimized according to the traditional research method cannot improve the learning effect of students. Aiming at the above problems, this paper proposes an action research method of mobile business English teaching model from the perspective of cooperation. Based on the demand analysis model proposed by Dudley-Evans et al., this paper analyzes the demand of mobile business English teaching. Design and implement action research methodology research plan according to requirements. After the implementation of the research plan, the author evaluates the teaching mode, so as to optimize the teaching mode and complete the research on the action research method of the mobile business English teaching mode from the perspective of cooperation. By comparing with the traditional action research methods based on data statistics, it is proved that the teaching mode applied in the research can greatly improve the students' business English learning effect, that is, the teaching mode action research method is superior in the cooperative perspective of the research.

Keywords: Cooperative vision; Business English; Mobile teaching; Action research

1. Introduction

Hutchinson and waters pointed out that special purpose English teaching is firstly a goal-oriented approach to English teaching and learning. Secondly, special purpose English teaching must be based on demand analysis, including target demand analysis and learning demand analysis. As one of the special purpose English, clear demand analysis is the fundamental to realize the integration of teaching with teaching. At present, the analysis of business English teaching needs mainly focuses on static single data information, which leads to poor teaching effect. By sorting out the literature related to demand analysis, the traditional empirical research on business English courses can be roughly divided into three categories. The second is to investigate the needs of students and make Suggestions for teaching design. The third is to investigate the needs of the industry and students, and compare their differences, so as to make Suggestions on teaching [1-2]. In general, previous studies mainly focused on the two dimensions of industry and market demand and the subjective demand of students, and seldom involved in other dimensions and paid little attention to the interaction and correlation of multiple data information sources, failing to show the overall demand of the course.

Nowadays, mobile learning has become a common teaching method. This kind of teaching takes mobile devices as the carrier, and pays attention to the mobility and adaptability of learners. It is not limited by time and place, and learners can learn independently with mobile devices [3]. From the perspective of cooperation, teachers' teaching is characterized by interactivity, practice, exploration, creativity and reflection. Combined with the needs of business English teaching, the mobile teaching mode of business English is studied, which is helpful for teachers to explore a teaching mode with better teaching effect. Therefore, this paper will study the behavioral research method of mobile business English teaching model from the perspective of cooperation.

2. Design of Action Research Method for Mobile Business English Teaching Model from the Perspective of Cooperation

2.1. Business English teaching needs analysis

Requirements analysis is often considered the first step in curriculum design. Initially, requirements analysis was used in the teaching of general English to help people decide what to teach and how to teach it. An effective business English course is developed on the basis of needs analysis, with the aim of explaining in as much detail as possible what students should do through the

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English medium. Later, with the development of learner-centered teaching methods, it was introduced into special-purpose English teaching to understand students' needs and discover problems in language teaching. Based on the demand analysis model proposed by Dudley Evans et al., this paper will analyze the demand for establishing business English teaching [4].

In the figure below is the demand analysis model proposed by Dudley Evans et al. This demand model combines the individual needs of learners as natural persons with the environmental needs of social persons. The research includes the personal information of learners, the professional information of learners, the professional communication in the target situation Language learning needs, learners' curriculum needs, learners' deficiencies, language information in the target situation and other seven aspects of specific learners' learning needs are analyzed [5].
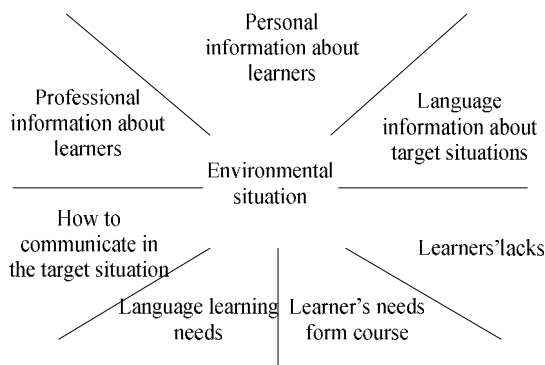

Figure 1. Requirements analysis model proposed by Dudley Evans, etc.

The teaching of business English must analyze the learning needs of students. According to the four elements of the model in the above figure and the research and analysis of students' needs in the teaching process, the teaching needs of business English must be determined by means of questionnaire. Students' demand analysis questionnaire for learning business English consists of two parts and four dimensions (learning ability gap, learning individual desire, learning process demand, learning environment demand). The first part is single choice. The questions are about English learning attitude, self-evaluation and evaluation of learning environment. The second part is multi-topic, about students' personal situation, learning difficulties, learning purpose and motivation, learning methods and strategies. Frequency analysis was used to calculate the multiple choice questions and analyze whether the demand of the students presented obvious concentration. SPSS19.0 statistical software was used to process the questionnaire data, c^2 and t tests were conducted on the data in the questionnaire according to formula (1) and formula (2) to determine the statistical significance of the difference between the data [6-7].

$$c^2 = \sum_{i=1}^{n} \frac{(x_i - \overline{x})^2}{E} \qquad (1)$$

$$t = \frac{|\overline{x} - m_0|}{S_{\overline{x}}} \qquad (2)$$

In formula (1), x_i is the score of the i th question in the questionnaire, $\overline{x}$ is the average score of the i th question

in all the questionnaires. E is the expected value of the i th question in all the questionnaires. In formula (2), m_0 is the population average during the t test, and $S_{\overline{x}}$ is the ratio between the standard deviation of the score of the problem and the square root of the number of data. According to the results of the questionnaire, the learning needs of students in mobile business English teaching were identified, and the action research plan from the perspective of cooperation was made and implemented.

2.2. Develop and implement a collaborative action research process

According to the requirements of mobile business English teaching analyzed in the above paper, an action research plan with four stages from the perspective of cooperation is made as shown in the following table 1.

The action research method studied in this paper has been studied in 3 rounds. After formulating the action research plan, follow the implementation flow chart of the action research plan of the business English mobile teaching model as shown in the figure below, and execute the plan as set out in the above table. After the execution of each round of plan, the execution effect of teaching mode is analyzed and summarized [8-9].

Each round carries out the specified action research plan according to the process shown in the figure above, and then evaluates the mobile teaching mode of business English.

Table 1. Action research schedule

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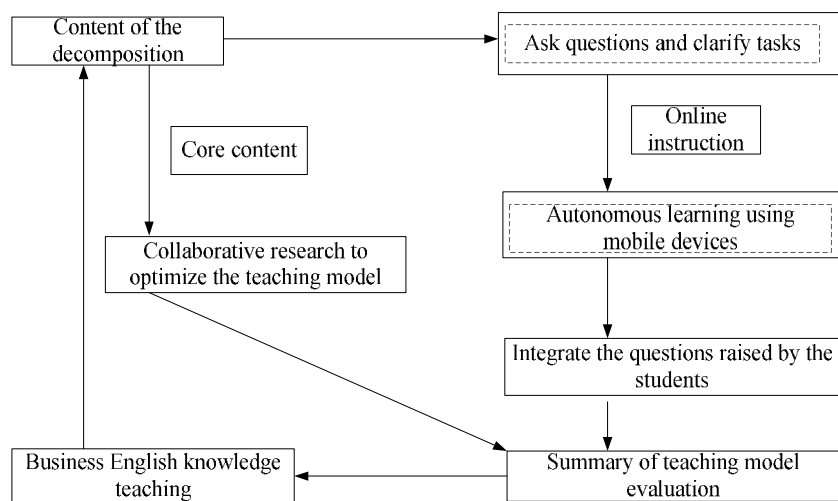| Serial number	Plan content	Instructions
The first stage	Make mobile teaching contents according to business English teaching plan. In the form of teachers and students exchanging roles, teachers' explanation becomes students' initiative to learn knowledge, so as to improve students' learning enthusiasm. The APP is used to assign learning tasks, issue relevant notices, set up simulation tests, record classroom performance and regular grades, so that students can finish tasks voluntarily on the network platform. Encourage students to collaborate or complete group learning tasks using mobile devices; Online homework review and correction, timely find students in the completion of the task encountered problems, focus on the explanation.	Complete the theoretical construction of the learning ability evaluation system combining the mobile teaching process of business English and the formative assessment and summative assessment of students
The second stage	Organize teachers to study and analyze the problems in the first stage, and verify the needs of students to learn business English based on the model analysis. Cooperation among teachers to optimize the mobile teaching model of business English.	Verify the demand analysis model and optimize the mobile teaching mode of business English
The third stage	Implement the optimized mobile teaching model of business English; To establish a learning ability evaluation system combining formative assessment and summative assessment.	After applying the optimized teaching model, students' learning effect is evaluated according to the evaluation system
The fourth stage	Make a reflective evaluation and summary of the effect of front wheel teaching reform.	Summarize the advantages and disadvantages of the teaching model

Figure 2. Flow chart of implementation of action research plan

2.3. Evaluation of mobile teaching mode of business English

After each round of the action research in table 1, students' mastery of the content taught by the teacher is analyzed according to their pre-class preparation, homework and in-class test. Business English courses require students to have both the language ability of English majors and the practical ability of business majors. In the development of students' language ability, English pronunciation, grammar, listening, speaking, reading and writing, and common expressions in business English are all the key points. In exercising your practical ability, combining with foreign literature and culture, the world economics, international trade and marketing, and other multinational interdisciplinary course, use range, high speed mobile teaching characteristics of excellent teaching material and teaching universities and colleges in Shared design, through online watch, offline study to discuss the way to solve the lack of teaching materials, the problem of insufficient resources. Focus on training students' practical ability. Make full use of the limited resources, overcome the difficulty of objective conditions, use mobile teaching methods to get in touch with various enterprises, conduct business scenario simulation, and let all students participate in real business activities [10].

Using questionnaire and test combination of evaluation, in 1.1 if the business English teaching demand analysis as a result, the cooperative analysis of the current problems existing in the teaching mode, the optimization to improve the teaching mode, and the next round of action research in the application of the optimized teaching mode to perform the action research plan in table 1, until the end of three rounds of action research. This paper summarizes the evaluation research process and gives the development direction of mobile business English teach-

ing model. So far, we have completed the design of action research method of mobile business English teaching model from the perspective of cooperation.

3. Experimental Verification

Mobile teaching is one of the common business English teaching modes in recent years. In order to make a systematic study on the teaching effect of this mode and effectively solve the problems existing in teachers' teaching time, this paper proposes an action research method of mobile business English teaching mode from the perspective of cooperation. In this section, a comparative experiment is designed to verify whether this method can improve students' business English.

3.1. Verification process design

Three hundred students majoring in business English were selected, and all of them had similar English test levels. The 300 students were randomly divided into two groups, namely the verification group and the comparison group. All the students are subject to mobile teaching by teachers of the same level. In the process of mobile teaching, the author adopts the action research method of mobile teaching mode in business English from the cooperative perspective of this paper. The students in the contrast group received the teaching mode which was adjusted according to the traditional method of action research based on data statistics.

Students in the two groups received mobile business English teaching with the same length of teaching time. Before the teaching, students' business English performance, English application ability and practical ability were tested as the measurement standard. By comparing the improvement degree of these three indicators of the two groups of students, this paper evaluates the advantages and disadvantages of the adjusted mobile teaching mode of business English, and then compares the advantages and disadvantages of the two action research methods.

When evaluating students' performance, English application ability and practical ability, the written test, oral test, real operation test and enterprise practice test are set according to the teaching requirements of business English. The full score of each test item is 10 points. After passing the above four test scores, students' comprehensive business English ability will be calculated according to the following formula.

$$G = \frac{r_1 X_1 + r_2 X_2 + r_3 X_3}{N} \qquad (3)$$

In formula (3), X_1 is the average score of all students in each group, X_2 is the average score of teachers on the English application ability of students in each group during the test, and X_3 is the average score of teachers on the practical ability of students in each group during the test. r_1, r_2 and r_3 are all parameters. According to the requirements of the business English syllabus, the three parameters are 0.35, 0.40 and 0.3 respectively. Statistical test results in different sections of the distribution of students, the evaluation of teaching effect. In the verification process, the control variable is unique, and relevant conclusions are drawn by analyzing the test data.

3.2. The verification results

Students in the verification group and the comparison group have passed 4 tests: written test, oral test, real operation test and enterprise practice test. The average score of each test is shown in the following table.

Table 2. The average scores of each test of the two groups

Serial number	Test project	Validation group	Control group
1	Written test	8.79	8.74
2	Oral test	8.63	7.11
3	Real operation	8.72	6.96
4	Enterprise practice	8.54	6.73

From the above table, it can be seen that in the written test, the average score of students in the verification group and the comparison group on this item is similar, indicating that the students' grasp of basic knowledge such as vocabulary is similar. There is a certain gap between the two groups of students' average scores in oral test, which indicates that the optimized verification group teaching mode has more advantages in oral test teaching. In the real scene operation and enterprise practice project test, the total average score of the students in the verification group was higher than that of the students in the comparison group, indicating that the students in the verification group had stronger business English application ability. According to formula (3), the comprehensive ability scores of the two groups of students were calculated. The scores of the verification group and the comparison group were 8.74 and 7.48, indicating that the comprehensive ability of the verification group was stronger.

The improvement of business English ability of students in the verification group and the comparison group after a period of study is shown in the following figure.
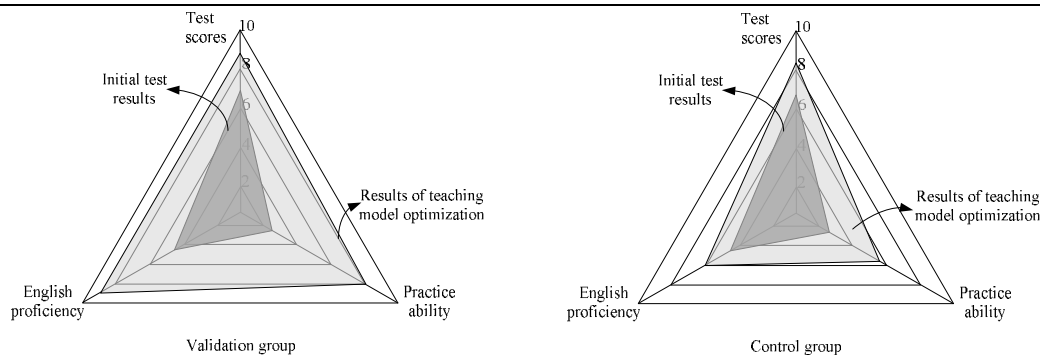
Figure 3. Comparison of improvement of students' business English ability

From the above analysis, it can be seen that before the mobile teaching of business English, the indicators of business English ability of students in the verification group and the comparison group are similar. After the teaching, due to the different optimization degree and direction of the teaching mode under the guidance of different action research methods, the business English ability of the two groups of students improved differently. Among them, the improvement of students' English application ability and practical ability in the verification group is much larger than that in the comparison group. Combined with the data in table 2, it can be shown that the business English teaching mode accepted by the verification group can better improve students' comprehensive ability. In conclusion, the mobile business English teaching model optimized by the action research method in this paper has better teaching effect.

4. Conclusion

By systematically sorting out the requirements of business English courses, this paper reveals an effective mobile classroom teaching organization and puts forward specific Suggestions for the teaching application of the demand analysis model. Through comparative experiments, it is proved that the method of action research presented in this paper is better.

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