An Empirical Study on the Effect of Goal-Centered Problem-Oriented Teaching Model Based on Mobile Platforms on Speciality English Classroom Anxiety

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Abstract: *Speciality English is characterised by substantial specialized words, complex reading content and sentence structure compared with General English. Therefore, students tend to feel bored, lack interest in learning, and even fear, leading to classroom anxiety. In view of the above situation, this study used questionnaires, interviews, SPSS software and other means to explore the impact of Goal-Centered Problem-Oriented teaching model based on mobile platforms on learners' anxiety and learning effects, and put forward suggestions to alleviate students' anxiety. This teaching model organically combines language and subject content, which to a large extent arouses the enthusiasm of students for professional English learning, makes learning more active, and ultimately helps to improve the learning effect.*

Keywords: *mobile platform, Goal-Centered Problem-Oriented teaching model, Speciality English, anxiety*

1. Introduction

English for Specific Purposes was first proposed by the famous linguist M.A.K. Halliday in 1964 in The Linguistic Sciences and Language Teaching ("English for civil servants, for policy, for offices of the law, for learners and nurses, for specialists in agriculture, for engineers and fitters.").[1]

College English Teaching Guide (2020) clearly pointed out that in the Information Era, multimedia technology, big data virtual reality artificial intelligence technology and other modern information technologies have become important means of foreign language education and teaching. It is advocated that colleges and universities should make full use of information technology, actively create a diversified teaching and learning environment, build or use online open courses, offline courses, online and offline hybrid courses, virtual simulation personalized courses and other high-quality courses, and implement a hybrid teaching mode to enable students to develop in the direction of active learning, autonomous learning and personalized learning. [2] As ESP, the teaching of ESP should pay more attention to the full development and utilization of "mobile platform".

Specialized English is highly specialized, with many specialized words and a large vocabulary. The reading content is relatively simple compared with ordinary English, and the sentence structure is more complex. Therefore, students tend to feel bored, lack interest in learning, and even fear, which leads to classroom anxiety. Anxiety is one of the important affective factors that affect foreign language learning. It refers to the fact that foreign language learners cannot overcome barriers to foreign language learning, or cannot achieve the expected learning goals, which leads to lower self-confidence of learners, thus forming an emotional state of anxiety, worry and fear. In the field of psychology, anxiety is generally divided into trait anxiety, state anxiety and specific situation anxiety [3]. Foreign language anxiety is a psychological state of nervousness, uneasiness or fear caused by failure to achieve the expected goal in foreign language learning, or a psychological state of fear or uneasiness caused by learners when using and expressing the target language.

In view of the current situation of vigorous development of "new engineering" engineering education, combined with the characteristics of school running, aiming at improving students' professional knowledge and English ability, this paper puts forward specific teaching reform strategies for professional English courses in response to current problems, so as to achieve the ultimate teaching

goal and provide referential guidance. This study applies goal-centered problem-oriented teaching model based on mobile platform to professional English teaching, and makes an empirical study on whether this teaching method can effectively alleviate students' anxiety in professional English classroom learning.

2. "Goal-Centered Problem-Oriented" Teaching Mode

2.1. "Goal-Centered Problem-Oriented" Teaching Characteristics and Objectives

Guangdong University of Petrochemical Technology put forward the goal-centered problem-oriented teaching mode, emphasizing that teaching should be combined with the characteristics of the curriculum, and the teaching requirements of each course should be broken down into several objective quality requirements. According to the school running goals, professional talent training goals, and the requirements of the curriculum teaching goals for students' overall comprehensive quality, the specific teaching content of the curriculum should be integrated, and the step-by-step teaching should be carefully designed to promote students' independent learning Stimulate various types and multi-level problems of students' interest in learning, turn the goal quality requirements into a problem system, and organize teaching through such links as guiding self-study before class, organizing research in class, and extending auxiliary learning after class, so as to promote curriculum teaching to effectively achieve the goal of talent training. [4]

2.2. Connotation of "Goal-Centered Problem-Oriented" Teaching Mode

The goal-centered problem-oriented teaching mode is a summary and inductive exploration in the process of teaching and talent cultivation. It takes the three goals of hierarchy as the main line, and the core is three goals and five problems. The goal is the core and has the directional function, respectively professional objectives, curriculum objectives and classroom objectives. The five major problems are interrelated and progressive, and the goal depends on the raising and solving of problems, namely, the design of basic problems, key problems, difficult problems, practical problems, and expansion problems. Based on goal-centered problem-oriented teaching mode, the question is the key, and the design of the question implies the consistency and conformity orientation behind the five major questions, from the pursuit of causality to the pursuit of relevance, from simple thinking to complex thinking, guiding students to actively construct such epistemological logic. [5]

3. Research Design

This research takes 66 non English major students as the subjects, and adopts a qualitative and quantitative method to investigate the effect of goal oriented teaching mode based on mobile platform on students' professional English classroom anxiety.

3.1. Research Questions

This paper studies whether goal-centered problem-oriented teaching mode based on mobile platform can effectively alleviate students' anxiety in professional English classes. It aims to alleviate college students' anxiety in English classes, help students turn anxiety into motivation, improve the effectiveness of professional English classes, cultivate professionals who meet the needs of social and economic development and industrial needs, and build a composite talent training mode that focuses on application and reflects professional characteristics, It provides feasible research ideas for the construction of new engineering courses of applied specialty.

The purpose of this study is to explore the following three issues:

(1) Is there any difference in students' professional English classroom anxiety before and after the experiment?

(2) Through the grouping analysis of gender and pre experiment English scores, is there any difference between pre experiment and post experiment students' professional English classroom anxiety?

(3) Through the comprehensive analysis of the overall situation and grouping situation, what problems do students encounter in the classroom with goal-centered problem-oriented teaching mode

based on mobile platform?

3.2. Research Object

The subjects of this study are two parallel natural classes of 2020 electrical engineering and automation major in a university in Guangdong Province, with a total of 66 people (34 in electrical class 1 and 32 in electrical class 2). Two parallel natural classes were selected for the experiment. The electrical class 1 was set as the experimental group, and the electrical class 2 was set as the control group. The teaching experiment lasts for 18 weeks, with 36 classes, two classes per week, and each class lasts for 90 minutes. Among them, the experimental class adopts the goal-centered problem-oriented teaching mode, while the control class adopts the traditional teaching mode. To sum up, the age, professional learning environment and campus environment of the subjects are the same, and their cognitive and learning abilities are basically the same, and the courses are held by the same teacher with rich teaching experience. Therefore, the research has the conditions for implementation.

3.3. Research Tools and Methods

The research adopts a qualitative and quantitative research paradigm. Through a semester of teaching experiments, the experimental data are statistically analyzed using questionnaires, interviews, SPSS 19.0 software and other means to measure whether there are significant differences in foreign language anxiety among students before and after the experiment.

1). Questionnaire

The questionnaire of this study is divided into two modules. In the first module, the items of the questionnaire are designed according to the actual teaching situation in the classroom, mainly investigating students' attitudes towards the goal-centered problem-oriented teaching model; The second module, based on Horwitz's Foreign Language Classroom Anxiety Scale (FLCAS), covers three aspects: test anxiety, communication anxiety and fear of negative evaluation. It aims to measure the role of goal oriented teaching in college English teaching environment on students' anxiety response. The answers to the two modules of the questionnaire were all based on the Likert five point system. The results showed that the Cronbach's Alpha coefficients of the two parts of the scale were 0.89 and 0.87 respectively, indicating that the questionnaire had high reliability.

2). Interview

After the experiment, the students in the experimental class were interviewed randomly or formally. Randomized interviews are mainly used to obtain students' real feelings and attitudes towards all aspects of goal-centered problem-oriented teaching. Formal interviews are mainly used to understand whether goal-centered problem-oriented teaching can change students' foreign language anxiety and investigate the causes of students' foreign language anxiety.

4. Data collection and analysis

SPSS 19.0 software was used to make statistics on the collected data to investigate the changes of students' foreign language anxiety and language proficiency. The statistical methods used included Independent samples T Test, Pearson correlation analysis and One Way ANOVA.

(1) Attitude

Before the experiment, the P value of motivation of electrical class 1 and electrical class 2 was 0.327, and the P value was greater than 0.05. The difference was not obvious, which showed that the motivation levels of the two classes were roughly the same; After the experiment, the motivation P value of electrical class 1 and electrical class 2 is 0.016, P value is less than 0.05, the difference is significant, which indicates that the motivation level of the two classes has a significant difference.

The results of the questionnaire showed that 58.9% of the students in the experimental class agreed and fully agreed with the goal-centered problem-oriented teaching model, 23.5% were "uncertain", and 17.6% were "disagree" and "completely disagree". This shows that most students have a positive attitude towards the goal-centered problem-oriented teaching model. The author sorts out the students' views on the development of their own abilities in goal-centered problem-oriented teaching according to the questionnaire and interview content. In general, students agree with the goal-centered problem-oriented teaching model and think it can help to cultivate their own critical thinking and sense

of cooperation, and improve the learning effect.

(2) Anxiety level

Before the experiment, because the students in the experimental group had just been exposed to the goal-centered problem-oriented teaching, their anxiety level was higher than that of the control group, and there was no significant difference between the two groups in terms of overall anxiety (P=0.825>0.05). However, after a semester of experiment, although the anxiety level of the two groups had decreased, the anxiety level of the experimental group was significantly lower than that of the control group, and the difference between the two groups was significant (P=0.010<0.05).

Students with low English proficiency report that once they can't understand the teacher's teaching content in class, they will have anxiety, which restricts their English proficiency and the improvement of professional knowledge. It can be seen that the students' English level is closely related to the teaching effect of goal-centered problem-oriented teaching. When learners feel language anxiety, it may affect the learning effect. The higher the students' English level and motivation, the more willing they are to cooperate with teachers and participate in various English activities. In order to explore the causes of students' foreign language learning anxiety, the author transcribed and sorted out the interview content, and analyzed that students' anxiety level was mainly related to evaluation means, learning motivation, homework burden, teacher feedback and classroom atmosphere.

5. Results and discussion

The experiment shows that most of the students hold a positive attitude towards goal-centered problem-oriented teaching. Moreover, compared with the traditional college English teaching, the goal-centered problem-oriented teaching shows obvious advantages. The goal-centered problem-oriented teaching transfers students' attention to the learning of subject knowledge. English is just a medium of content learning, which enables students to have more opportunities to use English and express their thoughts, thus reducing their anxiety during language learning.

After a semester of teaching, although the level of English classroom anxiety in both the experimental group and the control group has decreased, the level of anxiety in the experimental group has obviously decreased from a high level to a low level before the implementation of the goal-centered problem-oriented teaching. Although the anxiety in the control group has weakened, it has not changed much. The author believes that there are three reasons.

First, the curriculum of goal-centered problem-oriented teaching is connected with students' majors. The curriculum uses a lot of information and content related to professional knowledge, which greatly stimulates learners' interest. The improvement of learners' motivation level reduces their overall anxiety.

Second, goal-centered problem-oriented has truly achieved student-centered teaching, which is more practical and targeted. The real teaching situation created by teachers for a certain theme greatly enlivens the classroom atmosphere, makes students' enthusiasm for learning high, increases their ability to think, and thus alleviates tension.

Third, in goal-centered problem-oriented teaching, group cooperation can deepen the understanding between students, promote emotional communication among members, and give students more opportunities to express their thoughts. This increase in English use will reduce anxiety. Levine proposed that there is a negative correlation between the degree of anxiety and the amount of language use.

6. Conclusion

To sum up, the goal-centered problem-oriented teaching mode organically combines language and subject content, which to a large extent arouses students' enthusiasm for learning, makes learning more active, and ultimately contributes to the improvement of learning effect. It is suggested that the following strategies should be adopted to reduce students' anxiety so as to effectively improve their English proficiency.

First, encourage students more, give more positive affirmation, and gradually guide them to build self-confidence. Second, create a good classroom learning atmosphere. Harmonious teacher-student relationship and student student relationship can help alleviate students' anxiety. Third, provide

multiple evaluation means. Teachers should provide a variety of evaluation methods to help students eliminate anxiety. Fourth, enhance students' internal learning motivation, so as to effectively reduce anxiety and achieve the best learning effect.

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