



### Study on the Cultivation of College Students' Autonomous English Learning Ability Based on OBE + PBL Teaching Principle

### Wenjuan Huang<sup>1</sup>, Yuansheng Zhou<sup>2</sup>\*

<sup>1</sup>Xiangtan Institute of Technology, Xiangtan 411100, Hunan Province, China

**Copyright:** © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: It is an important requirement for education and individual development to apply the Outcome-Based Education (OBE) + Problem-Based Learning (PBL) teaching principle to cultivate college students' autonomous English learning ability in modern society, which has become a new development trend in foreign language teaching in the new era to optimize the teaching structure of college English courses and transform students' English learning results. Based on the concept of OBE + PBL, this study adopts a combination of quantitative and qualitative analysis methods to reveal whether the four components of self-directed learning files, namely learner desire, learner wit, learner initiative, learner perseverance, and 22 sub-components, have a positive and significant correlation with college students' English scores. This paper explores the internal needs of college students for independent English learning. It guarantees the steady improvement of college students' independent English learning ability by introducing a student-centered project system.

**Keywords:** OBE + PBL teaching principle; College students independent learning; English proficiency; Correlation analysis; Project teaching

Online publication: December 23, 2024

### 1. Introduction

Self-directed learning is the ability to self-manage, that is, to make decisions and deal with problems related to learning. Independent learning is based on cultivating talents with independent learning ability and adapting to social development. It is a kind of learning ability and a learning strategy <sup>[9]</sup>. The establishment of a learner-centered teaching viewpoint makes it the consensus of educators to cultivate learners' autonomous learning abilities. In addition to enabling students to master the necessary knowledge and skills, modern teaching pays more attention to improving students' learning ability, especially their independent learning ability, to lay a solid foundation for their lifelong learning <sup>[6]</sup>. Therefore, cultivating students' ability to learn

<sup>&</sup>lt;sup>2</sup>School of Mechanical and Electrical Engineering, Central South University, Changsha 410083, Hunan Province, China

<sup>\*</sup>Corresponding author: Yuansheng Zhou, zyszby@csu.edu.cn

English independently is not only the main goal of English teaching but also the focus of educators and researchers.

In January 2009, the Key Points of 2009 issued by the Department of Higher Education of the Ministry of Education mentioned for the first time the promotion of the curriculum planning of college English independent education and made clear the basic requirements for promoting college students' independent learning and training using information technology <sup>[2]</sup>. In February 2017, the General Office of the Ministry of Education issued a notice on the "Key Points of Education Informatization Work in 2017," which will build independent learning networks and communities as the focus of higher education reform and development, and based on the different needs of different professional education, detailed new requirements for independent learning and training of higher talents. In March 2022, the launch of the National Higher Education Smart Education Platform and the National Vocational Education Smart Education Platform will provide new impetus for the independent learning and training of higher talents <sup>[3]</sup>.

## 2. Theoretical basis for the cultivation of English autonomous learning ability of college students in OBE + PBL teaching principle

Outcome-Based Education (OBE) concept is a student-centered, student-oriented learning output, through the evaluation and use of learning output, and continuous improvement of an education model. The Problem-Based Learning (PBL) teaching method was first proposed by American neurologist, Professor Barrows at McMaster University in 1969 and was initially mainly used in medical education. The PBL teaching method is also student-centered. Under the guidance of teachers, it takes problems as the starting point for learning. In other words, it guides students to actively explore and think based on real problem situations, and plans learning content with problem-solving as the core, so that students can seek solutions around problems. A teaching method that trains students to discover, analyze, and solve problems independently. The teaching process of PBL can be used as a transition from solving virtual problems to solving practical problems <sup>[4]</sup>. It can be said that OBE points out the concept and direction of curriculum teaching, while PBL provides the way of curriculum design and implementation. OBE + PBL integrated education and teaching principle is an innovative teaching mode.

From a demand-oriented perspective, based on the OBE + PBL learning mode to promote the cultivation of college students' independent English learning ability, it will be an inevitable trend to build a multi-interactive curriculum teaching system in the future, which will play a promoting role in better improving the English curriculum teaching system and improving the comprehensive ability of college students' English listening, speaking, reading, and writing. Fully realizing the systematic development of independent learning and practical training of English teaching at all stages to meet the personalized learning needs of college students in the new era of English knowledge. Lay a solid foundation for college students to play their professional advantages in English course learning and adapt to the new environment of independent learning.

## 3. The dilemma of cultivating English autonomous learning ability of college students in OBE + PBL teaching principle

College English courses cover most of the university majors, and the number of students is large, accounting

for 4 to 6 credits, a period of about two years. With the development of the social economy and globalization, society has put forward higher requirements for the English level of college talents, and college English teaching has gradually failed to meet the needs of social development.

### 3.1. Disconnection between practical teaching and theoretical teaching

College English courses generally include reading and writing courses and audio-visual speaking courses. The content of the reading and writing course is mainly derived from the text content, focusing on strengthening students' basic vocabulary, phrases, and grammar knowledge, and exercising students' reading, translation, and writing abilities through exercises after class. Many contents of the audio-visual content are fixed, most of the learning content is out of touch with the social times, and the flexibility is weak. Some college English curriculum designs have failed to effectively strengthen students' English learning and expression ability, but unilaterally according to the traditional college English teaching method which mainly focuses on instilling language knowledge and supplemented by ability training, and the practical use of language is not strong in connection with positions, which has been unable to meet the needs of society.

### 3.2. Practical teaching content lags behind market demand

English is a very practical language tool, requiring students to find their advantages and disadvantages through continuous practice. However, the learning ability and learning methods of many college students are still in the senior high school stage, with weak learning initiative, unclear learning purpose, low enthusiasm and interest in learning, and a large number of students, accounting for 70%, lack of independent learning habits. Most of them are weak in English application and practice due to the lack of practice opportunities. College English, to some extent, is in a state of "only learning but not using." Therefore, in the process of college English learning, the leading and supervising role of teachers is extremely important [1].

### 3.3. The lack of students' subjective initiative in independent learning

OBE + PBL theory advocates the establishment of a student-centered practice system, a systematic English course education connection, and a "use to promote learning" education mode that emphasizes learners' learning practical ability, which is also an inevitable trend of college English curriculum reform. Based on this situation, the author conducted a college English lecture, the main purpose of which was to understand the current situation of college English teaching. The second is to understand students' needs for independent English learning. Many of these students who do not study well do not want to study well, nor cannot study well, but lack interest in learning. Through the discussion, it is found that the reasons for the lack of interest of most students are mainly concentrated in four aspects:

- (1) Students do not understand the close relationship between their major and English, and cannot see the future and prospect of major + English development.
- (2) Students do not understand the importance and necessity of the courses in their major.
- (3) Students do not know how to learn college English well and to what extent. Students do not know the goals and tasks for each of the two years and four semesters.
- (4) Students do not know the goals and tasks of the two years, four semesters, and each stage [7].

## 4. Multi-dimensional experiment combining OBE + PBL principle and independent learning ability

At the moment, the OBE + PBL integrated education teaching model has not been systematically defined, and most of it is manifested in classroom teaching in the way of practical application. In this study, 190 first-year college students in several colleges and universities in Hunan were investigated by questionnaire, and 169 valid experimental data were obtained (accounting for 89% of the total number). This paper mainly studies the correlation between the independent learning ability and English proficiency of first-year college students. The experimental data is obtained through the collection of actual samples, and the data is analyzed in detail. This study adopts the self-directed learning archives developed by Human Resource Development Enterprises (HRDE). The independent learning file is composed of four parts: learners' desire, learners' wit, learners' initiative, and learners' perseverance, which are further divided into 22 sub-parts with 164 questions [9].

All questionnaire choices were graded on a 10-component scale. The options range from "never" (0 points) to "always" (10 points). Statistical Package for Social Sciences (SPSS17.0) is used to analyze the quantitative data obtained from the questionnaire. During the data analysis, the results of the questionnaire will also be analyzed and compared to better ensure the reliability of the research results [8].

Pearson's correlation coefficient reveals that self-learning files have a positive and significant correlation with students' English scores (Pearson correlation coefficient is 0.247\*\*). The Pearson correlation coefficients of learners' desire, learners' wit, learners' initiative, and learners' perseverance with students' English scores in the college entrance examination are 0.273\*\*, 0.242\*\*, 0.177\*, and 0.205\* respectively. Among them, learners' desire has the greatest correlation with English scores in the college entrance examination. Additionally, except for "goal orientation," "communication skills," and "goal retention," the other 19 sub-parts were positively and significantly correlated with English scores in the college entrance examination, among which "conflict resolution" was the strongest (Pearson correlation coefficient was 0.315\*\*).

According to the survey data analysis, there is a significant correlation between college students' autonomous learning ability and their English proficiency. It shows the importance of independent learning and that guiding and cultivating students' independent learning ability is also an essential measure to meet the needs of social development [10].

# 5. Scientific strategies for cultivating college students' autonomous English learning ability based on OBE + PBL

On the whole, this teaching mode is seldom used in the training of college students' autonomous learning ability. This paper intends to combine the traditional foreign language teaching mode with OBE + PBL, hoping to provide innovative ideas and practical paths for the reform of the teaching mode of foreign language application-oriented talent training in local universities under the new liberal arts perspective.

### 5.1. Adopting a diversified education strategy centered on student growth

Traditional college English teaching assessment is mainly based on written test results, but in college English teaching based on the concept of OBE + PBL, teachers can arrange for students to form a study group first, take charge of a project independently, then design, discuss and summarize the project plan. Teachers carry out scientific educational guidance and content penetration for students' learning results and learning content

in each learning stage, so that students can fully display their learning results in each stage of the project. In the process of completing the project, students can learn more comprehensive knowledge and improve their problem-solving ability, which is of great significance to the development of students <sup>[5]</sup>.

## **5.2.** Diversity of educational evaluation methods for self-directed learning in OBE + PBL teaching mode

The independent learning of OBE + PBL teaching mode requires students to do more independent learning and cooperative learning, and the learning burden of students will increase correspondingly. Teachers can combine formative assessment with summative assessment. In addition to considering students' theoretical knowledge of English, teachers should also take the elements of practical English application ability as an important basis for teaching assessment, to achieve the goal of "taking assessment as the basis and taking students as the center," that is, promoting learning through assessment. Simultaneously, teachers need to change from the traditional teaching mode to the role of leader and mentor. For example, in the classroom, students' performances in debates, activities, competitions, and other aspects in and out of the classroom should be incorporated into the end-of-term evaluation system from multiple perspectives and elements, and students and teachers should conduct two-way evaluation, and combine the evaluation results with the written test results, as a final grade evaluation criterion.

### 5.3. OBE + PBL teaching model of self-learning training precise positioning

Colleges and universities need to strengthen the training of teachers, improve the application ability of teachers' OBE + PBL teaching methods, and train more OBE + PBL teaching experts. In terms of teaching facilities and resources, further improvement should be carried out to provide a better guarantee for the implementation of OBE + PBL teaching mode, improve students' autonomous learning ability through various ways, and make students better adapt to the requirements of OBE + PBL teaching mode. Strengthen international cooperation and exchanges, learn advanced PBL teaching concepts and experiences from abroad, and promote the better development of PBL teaching mode in local universities.

In the future, universities need to further improve their policies, teaching staff construction, teaching facilities, and resources to promote the better development of OBE + PBL teaching mode in universities. It is believed that soon, OBE + PBL teaching mode will become the mainstream teaching mode in colleges and universities, and make greater contributions to training more compound talents.

### 6. Conclusion

OBE + PBL integrated education teaching mode analyzes the maximum ability that learners can achieve after learning (learning outcomes), adopts the idea of reverse design and positive support, builds the curriculum system based on learning outcomes, determines teaching strategies and develops evaluation standards, lays more emphasis on students' values, beliefs and attitudes, and pays more attention to what students can learn and how to use it. It is found that the educational concept can fully mobilize students' enthusiasm, initiative, and creativity in learning.

Practice has proved that the combination of the OBE education concept and the PBL teaching method can greatly improve students' learning interest and attention, not only improve the quality of talent training but also realize the transformation of the education paradigm in local application-oriented undergraduate

colleges. The curriculum reform of foreign language teaching should not only absorb the experience of traditional teaching knowledge teaching system, high efficiency, and wide audience. It is also necessary to integrate with the industry and learn advanced creative ideas and operation modes. In teaching, the introduction of the OBE education concept can highlight the student-centered, and build a demand-oriented, student-oriented, ability-oriented, cooperative, and application-oriented classroom teaching system.

### **Funding**

Educational Innovation Research Program of Central South University (Project No. 2022jy032).

### **Disclosure statement**

The authors declare no conflict of interest.

### References

- [1] Quantao L, 2024, Research on the Cultivation of College Students' English Autonomous Learning Ability Under the Hybrid Learning Model. Educational Theory and Practice, 262(09): 167–169.
- [2] Nie Y, 2023, An Empirical Study on Students' Online Autonomous Learning Willingness Under the Hybrid Teaching Model of Higher Vocational English. Journal of Jiamusi Vocational College, 39(12): 205–207.
- [3] Li X, Li L, 2021, Research on the Cultivation of Autonomous Learning Ability of English Major Students in Private Colleges Under the Hybrid Teaching Model. Cultural and Educational Materials, 2021(15): 235–236.
- [4] Peng H, 2024, Practical Research on OBE-PBL Integrated Teaching Model Under the Perspective of New Liberal Arts Taking the Teaching of Basic 3D Animation Course as an Example. Special Research on Education and Teaching Reform of Film and Television Animation Major, 2024(09): 119–123.
- [5] Xia X, Hu Y, 2022, Reflections on the Reform of Teaching Mode of English Academic Paper Writing Influenced by Project Learning Theory. Modern English, 2022(03): 21–24.
- [6] Philips AD, 2004, An Assessment of the Learner Autonomy of Students Enrolled in Academic and Vocational Programs at Tomas Nelson Community College, thesis, United States Military Academy.
- [7] Lu C, Yuan J, 2022, Research and Practice on Cultivating Autonomous Learning Ability of Students in Applied Universities. Modern English, 2022(03): 21–24.
- [8] Lowe C, 2009, A Correlational Study of the Relationship Between Learner Autonomy and Academic Performance, thesis, The George Washington University.
- [9] Cohen AD, 2000, Strategies in Learning and Using a Second Language. Longman, New York.
- [10] Peng CT, 2003, The Culture of Leaning and Its Impact on Learner Autonomy: Observations from a Chinese University, thesis, Dissertation Abstract International, 65(02): 461.

#### Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.