

The Reform of Curriculum Assessment System Based on OBE-PAD Concept

—The Case of International Business Communication

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Abstract

Based on the core concept of student-centered and outcome-oriented teaching concept, in view of the issue that traditional curriculum teaching cannot effectively support the cultivation of students' ability, the study proposes the assessment system reform based on OBE-PAD concept. Taking the course of "International Business Communication" as an example, according to the teaching objectives, the course assessment and evaluation scheme were redesigned to achieve full monitoring of learning process and strengthen process management, so as to achieve the goal of training international business communication talents with innovative ability.

Keywords

OBE-PAD Concept, Assessment System, International Business Communication

1. Introduction

China was officially approved by the General Conference of the International Engineering Alliance as the 18th member of the "Washington Agreement" on June 2, 2016, which marked the international recognition of the engineering education quality in China, and was an important step forward in the internationalization of engineering education (Bai, 2019). The core of the quality certification is to confirm that engineering graduates meet the established quality standards recognized by the industry, which is a qualification evaluation oriented by training objectives and graduation requirements. Colleges and universities across the country are actively exploring the training mode of engineering practical talents, optimizing teaching and assessment methods to improve students'

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comprehensive abilities (Li & Deng, 2016).

The OBE (Outcome-Oriented Education) concept was initially applied to the field of engineering education. It became popular in the United States and Australia at the end of the 20th century and now has become an educational paradigm highly recognized by the global higher education system (Li & Tan, 2017; Li et al., 2020a). The concept is also named result-oriented education, ability-oriented education, goal-oriented education or demand-oriented education, which is an advanced education based on student-centered and reverse thinking curriculum system construction concept (Liu, 2022). Based on the OBE model, the United States, the United Kingdom, Germany, and other countries have infiltrated the “student-centered” concept into all levels of student education. OBE-based concept, result-oriented teaching and assessment methods, and student-centered and continuous improvement have become the major trend of current higher education teaching reform (Li et al., 2020b).

Based on the OBE concept, the theory of Presentation Assistance Discussion (PAD) (Zhang, 2014) defines classroom teaching as an equal emphasis on teachers’ teaching and students’ autonomous learning, and integrates the advantages of many teaching methods such as flipped classroom, autonomous classroom, efficient classroom, project-based teaching, and case teaching by redefining classroom, which reshapes teacher-student relationship (Sun et al., 2022). The PAD theory assessing method focuses on process evaluation, and the OBE concept focuses on results and changes in the structure of students’ abilities (Qiu, 2016). Both pay attention to the diversification of process assessment and achievement evaluation. The integration of the two can be said to complement and complement each other.

This paper takes “International Business Communication” as an example to make a preliminary exploration. The supporting relationship between the curriculum training objectives and the students’ graduation requirements is established, the curriculum teaching objectives are refined according to the ability training requirements, and the curriculum assessment and evaluation scheme are redesigned. Finally, the overall evaluation and individual analysis of the degree of achievement of the curriculum objectives are carried out. According to the results, whether the formative evaluation form of the curriculum objectives was reasonable and whether the teachers’ measures to find and solve problems were appropriate are identified, which served as a feedback basis to promote the continuous improvement of the curriculum teaching. The main contribution of this study is to set up an outcome-oriented assessment system based on divided classes as teachers’ teaching and students’ operational expansion.

2. Determination of Curriculum Training Objectives

High-level development of international economy is inseparable from the training of high-quality international economic application-oriented talents. “International Business Communication” is a typical and representative professional

course for students to master the core competence of international business communication and cultivate high-quality application-oriented talents in the international business field. By systematically learning and mastering the English writing methods of cross-cultural business communication such as letters, contracts, all kinds of copy-writing, as well as various workplace communication methods, students can improve their business communication ability and business processing ability in international economic and trade activities, and cultivate high-quality, composite international business application-oriented talents (Liu & Li, 2022).

Based on the concept of OBE-PAD, the training of high-quality and application-oriented international business communication talents is achievement oriented. By means of survey, interview, data collection, etc. the curriculum training objectives are determined by taking the needs of job market demands and student development as the center. According to the level and type of professional ability objectives, following the basic principle of developing students' learning ability, based on the real work tasks and work processes, concerning typical situations, typical projects and learning practice tasks, applying flipped classroom method, "teaching" and "learning" interaction method, online platform and other student-centered interaction modes, and adopting specific and feasible teaching plans, to promote international business communication talents with good professional skills and innovation ability. In terms of teaching mode, based on the "student-centered" OBE-PAD concept, the overall teaching is divided into teacher centered teaching links and student-centered expansion links, integrating both online and offline advantages to form a "split classroom" teaching mode. In the teaching process, we should build a "three-stage" teaching process as before, during and after class processes.

Based on the OBE-PAD concept, oriented by the cultivation of high-quality and application-oriented international business communication talents, through research and analysis of the market demand for high-quality and application-oriented international business communication talents in the new development stage, combining the professional training objectives and students' graduation requirements, the teaching objectives are determined according to the graduation requirements and specific indicators set in the student training program, so that International Business Communication can strongly support the talent training objectives. A series of teaching contents, teaching activities, evaluation activities, teaching evaluation and continuous improvement mechanism are carried out around the curriculum objectives. The assessment standards are in line with the graduation requirements. The assessment content adheres to the "student-centered" principle. Usually, independent learning and final assessment are equally important. The assessment results provide a basis for the continuous improvement of the next round of curriculum objectives, and the coupling and interaction between the "student-centered" curriculum objectives and the assessment system are realized. The overall process is shown in **Figure 1**.

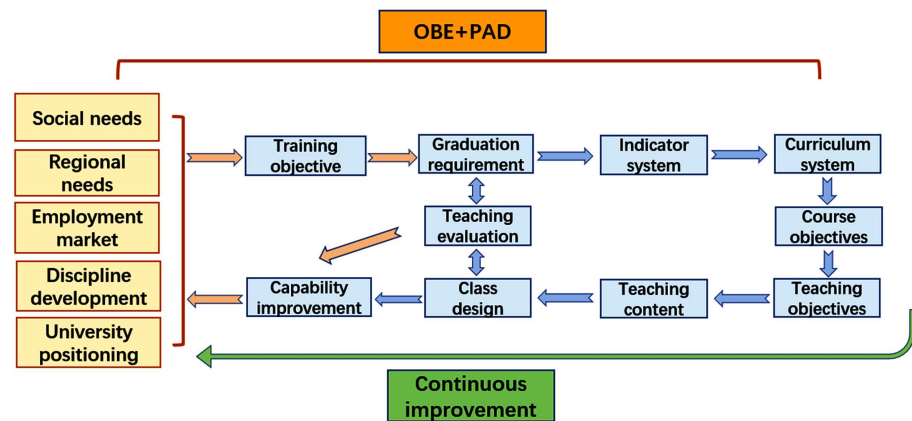


Figure 1. The determination of curriculum training objectives based on OBE-PAD mode.

According to the training program, students' graduation requirements are divided into three aspects: knowledge, ability, and quality. According to the graduation requirements, the teaching objectives of "International Business Communication" are reorganized and reconstructed. The teaching objectives are divided into three levels: basic objective (knowledge objective), advanced objectives (primary ability objective, advanced ability objective), and deep-level objective (quality objective).

1) Basic objective (knowledge objective): Imparting knowledge of international business communication.

2) Advanced objectives (primary ability objective, advanced ability objective): The cultivation of international business communication ability, including cross-cultural communication ability, autonomous learning ability and problem-solving ability in the English context.

3) Deep-level objective (quality objective): Shaping the core values of cross-cultural communication, including international vision, moral quality, social responsibility, innovation awareness, and ideological and political connotation in cross-cultural communication. The ideological and political connotation involves the cultivation of students' country-belonging feelings, benevolence, and other relative core values.

The specific course objectives are as follows:

1) Knowledge Objective. Be familiar with primary principles and prevailing practices of international business and trade activities, including effective writing skills for international business communications, international trade communications, basic international business messages, proposals and reports, and employment communications.

2) Primary Ability Objective. Be able to write standardized business letters and other messages, including business letter writing in the major steps of import and export activities, basic international business messages, proposals and reports, employment communication messages with good English skills.

3) Advanced Ability Objective. Be able to comprehensively apply international communication messages-writing and oral-presentation skills and strate-

gies to communicate effectively with international clients in English context.

4) Quality Objective. Be able to demonstrate an international vision in the diverse cultural context, and be able to possess a high level of humanistic accomplishment and sense of social responsibility, demonstrate professional ethics, norms, country-belonging feelings, benevolence, and other relative core values in international business communication practice.

Corresponding relation of course objectives and training standards are shown in **Table 1**.

According to the four index points of the curriculum-supporting graduation requirements, we decompose the curriculum objectives into four teaching objectives, which are subdivided into multiple learning links to cultivate students' comprehensive abilities in various aspects. The corresponding curriculum teaching objectives are shown in **Figure 2**.

3. Design and Implementation of Teaching Assessment Scheme

3.1. Teaching Assessment Scheme Design

The "student-centered" assessment system is designed for "all-round" assessment

Table 1. Matrix of key indicators for graduation.

Graduation Requirement	Indicators for Graduation	Course Objective	Weight Coefficient
2) Professional Knowledge	Indicator Point 2-1: Systematically master the international business communication theories, principles, and basic skills.	Course Objectives 1	0.2
	Indicator Point 2-2: Systematically master the international business practices and frontier dynamics.	Course Objectives 1	0.1
5) Comprehensive Application	Indicator 5-1: Be able to write standardized business letters and other messages with good English writing skills.	Course Objectives 2	0.25
	Indicator 5-2: Be able to communicate effectively with international clients in English working context.	Course Objectives 3	0.25
8) International Vision	Indicator 9-1: Demonstrate an international vision and the awareness of cross-cultural communication.	Course Objectives 4	0.1
9) Social Responsibility	Be able to possess a high level of humanistic accomplishment and sense of social responsibility, and be able to observe and practice professional ethics and norms in international business communication practice.	Course Objectives 4	0.1

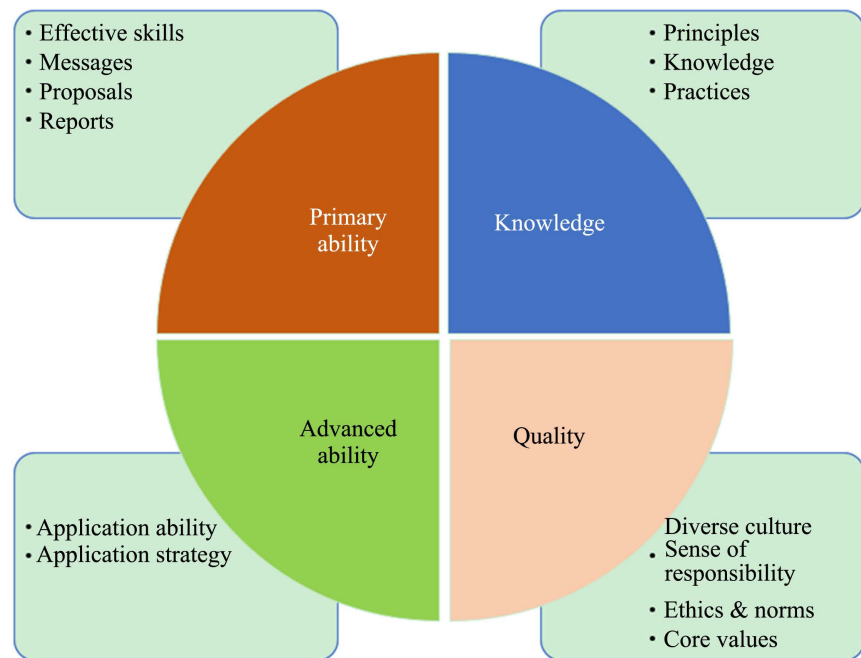


Figure 2. Teaching objectives of international business communication.

with outcome-orientated teaching objective, and the assessment system is built according to the teaching objectives. The assessment focuses on students' performance in the process, and increases the proportion of daily performance assignment, with 50% of daily performance and 50% of final exam. During daily study, the performance focuses on independent learning before and after class, with the focus on student's operational expansion links in class. The final exam sets examination questions for the three levels of learning objectives: professional knowledge, primary and advanced practical ability, and core values. The assessment results promote the continuous improvement of the next round of teaching, and the assessment methods are coupled and interactive with the curriculum objectives.

The assessment method used to be based on the final evaluation, with the usual scores accounting for 30% and the final examination accounting for 70% (Zeng et al., 2019). New assessment system implements the concept of whole process monitoring, and comprehensively evaluates the links involved in the learning process, especially the student development links under the PAD concept, including pre-class warm-up exercises, classroom operation expansion, in-class and after-class writing training, which are called process assessment. Combined with the final exam, the traditional summative assessment has shifted to an evaluation system that pays equal attention to formative and summative assessment.

The assessment content is divided into four parts, namely, class performance, operational expansion, communication practices and final exam, accounting for 10%, 20%, 20% and 50% of the total course scores respectively. Specific assessment is shown in **Table 2**.

Table 2. Teaching assessment design and standards based on OBE-PAD concept.

No.	Course Objective	Assessment Method	Weight Coefficient	Standards for Each Part of Assessments
1	Objective 1 Knowledge	Class Performance	2%	<p>Class Performance: Comprehensive evaluation by teachers based on students' participation in the class learning, class activities participation, learning attitudes, and interactions with teachers and classmates.</p> <p>Operational Expansion: With diversified teaching methods such as role-playing method, project teaching method, situational teaching method, trade transaction experience method, etc. students will be substituted into the import and export trade links in real international business communication, project research and report analysis, demonstration links, daily international business communication links, international business copy-writing creation links, etc. through specific business communication practices, the knowledge points of the unit are connected in series.</p> <p>Communication Practices: Students will practice business communication messages, business transaction letters, proposals and reports, presentations, employment communications according to the given situations, and the practices are evaluated according to the content, English language fluency and the formats.</p> <p>Final Exam: The final exam is designed in the form of a closed-book exam in accordance with the requirements of the syllabus. The teacher evaluates the questions based on the student's exam papers.</p>
		Operational Expansion	2%	
		Communication Practices	5%	
		Final Exam	10%	
2	Objective 2 Primary Ability	Class Performance	2%	
		Operational Expansion	8%	
		Communication Practices	5%	
3	Objective 3 Advanced ability	Final Exam	10%	
		Class Performance	3%	
		Operational Expansion	5%	
		Communication Practices	5%	
4	Objective 4 Quality	Final Exam	15%	
		Class Performance	3%	
		Operational Expansion	5%	
		Communication Practices	5%	
		Final Exam	15%	

3.2. Practice of Assessment Scheme

The application of teaching assessment scheme in teachers' teaching side. The "student-centered" teaching mode, which integrates the concepts of OBE and PAD, focuses on highlighting the real needs of students. All course links are designed according to the requirements of students' actual knowledge, ability and values cultivation, and the classroom is divided into two parts: teacher teaching and students' practice expansion. In the pre-class link, teachers analyze the effect of students' self-study before class through platform data, and adjust the theoretical system construction and key and difficult points setting of the links in class; In the course link, students should expand the completion of tasks, adjust the task settings, continue to improve, imperceptibly improve students' independent learning ability and innovation ability, shape students' core values, and adjust the arrangement of independent learning tasks after class based on the completion of students' expanding tasks; In the after-class link, the teacher adjusts and sets the pre-class autonomous learning task of the next unit through the analysis of the relevant data completed by the students in the after-school autonomous learning task. The whole teaching process forms a closed-loop form of "student-centered" to achieve continuous improvement of "student-centered".

The effectiveness assessment of teachers' teaching side focuses on the effectiveness of process learning. The specific forms include guided questioning, example letter analysis, brainstorming, group activities, classroom speeches, classroom exercises, classroom quizzes, etc. The teacher assessment focuses on the process and ability of students to understand and use knowledge to create new knowledge (Wang et al., 2020).

The application of teaching assessment scheme in student expansion. With students as the main body of learning, we adopt diversified teaching methods to substitute students into the real workplace environment through various situations, projects, roles, etc. At the same time, through consistent design, we connect the knowledge points between and within each unit to effectively stimulate students' learning interest and awareness of independent learning, and through various environments, we subtly improve students' practical ability and shape core values. In the assessment of the student side, students are the main body, and they should give full play to their autonomy, initiative, and creativity in learning. Therefore, the assessment focuses on the situation simulation communication practice, project communication practice, role communication practice, etc. as well as the knowledge mastery, ability improvement and quality cultivation reflected in the practice of students.

4. Achievement Degree Analysis

Based on the OBE concept, the calculation and evaluation criteria of achievement degree of the teaching objectives are designed around the evaluation of whether the objectives are achieved or not, with the output oriented and the dynamic comparison and continuous improvement of the curriculum effects as the objectives. The specific calculation method is shown in Table 3, and Formulas (1) and (2).

Achievement degree of each assessment link is calculated as Equation (1), while total achievement degree of the course is computed as Formula (2).

$$\begin{aligned} & \text{Achievement degree of each assessment link} \\ & = \frac{\text{average score of each assessment link}}{\text{target score of each assessment link}} \end{aligned} \quad (1)$$

Table 3. Course assessment and achievement degree calculation.

Supporting Links of Course Objectives	Daily Performance	Daily Performance	Daily Performance	Final Exam (50%)				Total Score (100%)
	1 (10%)	2 (10%)	3 (10%)	Course Objective 1	Course Objective 2	Course Objective 3	Course Objective 4	
Average Score	Class Performance	Operational Expansion	Communication Practices					
Target Score								
Achievement Degree								

Total achievement degree

$$= \frac{\sum \text{Average score of each assessment link} \times \text{weight of each assessment link}}{\sum \text{Target score of each assessment link} \times \text{weight of each assessment link}} \quad (2)$$

Taking the teaching assessment data of 101 students majored in International Economics and Trade who took the examination in 2022 of the School of Economics and Management as the sample, the analysis was carried out by combining overall evaluation with individual analysis. The data is collected from junior students of International Economics and Trade Department who took the course and participated in the examination; the daily performance data is directly down-loaded from the class app on the internet. During the overall evaluation of the achievement degree of the curriculum objectives, according to the curriculum syllabus, for each assessment link corresponding to the curriculum objectives, the average scores of the corresponding assessment results are calculated using the goal achievement degree calculation formulas (see Formulas (1) and (2)), and the analysis results are shown in **Table 4**.

It is showed in **Table 4** that the vast majority of the students have achieved a very high degree in meeting with the teaching objectives, with the achievement degree as 0.893 and above. For the four objectives, the teaching objective 4 is with the highest achievement degree, as 0.931, and objective 3 lists the second, while objective 1 lists the last, indicating that more efforts should be taken for knowledge comprehension and practices.

When evaluating the achievement of teaching objectives, not only overall evaluation has been conducted, individual analysis should also be attached with importance. During the individual evaluation of the achievement of teaching objectives, the average score of each student's corresponding assessment results is calculated for the assessment link corresponding to each curriculum objective, as shown in **Figure 3**.

As far as individual students are concerned, there are eight students' achievement degrees of objective 1 are lower than 0.8, four students' achievement degrees of objective 2 are lower than 0.8, two for objective 3 and three for objective 4. After analyzing the scores of individual students, two major reasons are identified: one is that individual students also fail to complete their homework and operational expansion links, resulting in their low scores in daily performance; In addition, some students are weak in English, and they still need to further strengthen their training in mastering basic English language problems, and in which type of questions students' performance is not doing well.

The above gives the overall evaluation and individual analysis of the achievement of the curriculum objective respectively. Finally, according to the evaluation results of the achievement of each objective, we will determine whether the formative evaluation form of the curriculum objective is reasonable in the formative evaluation process, and whether the teachers' measures to find and solve problems are appropriate, which is used as a feedback basis to promote the continuous improvement of teaching quality.

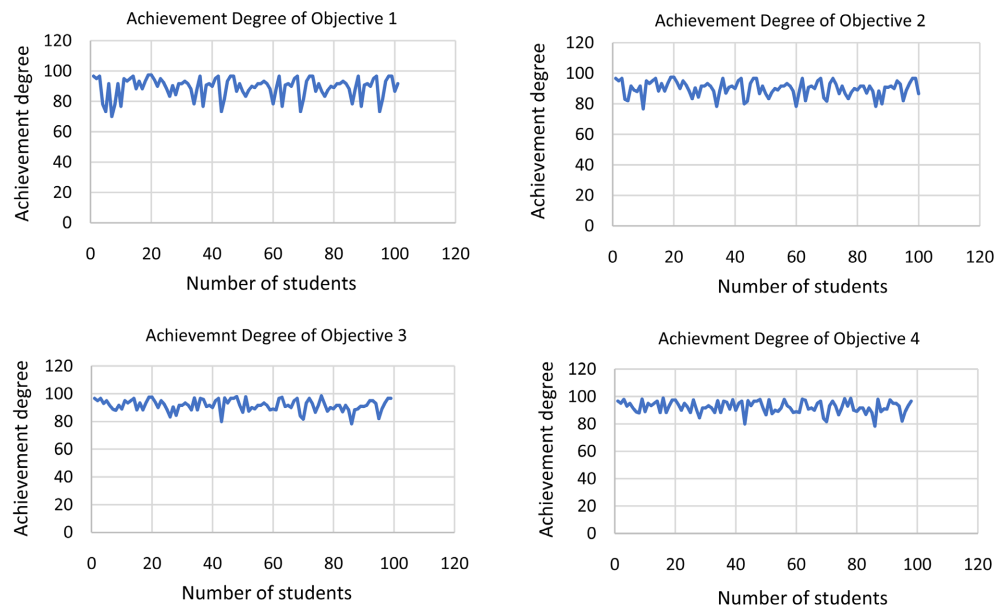


Figure 3. The achievement degree of four learning objectives.

Table 4. Teaching achievement degree of international business communication of 2022.

Supporting Teaching Objectives	Assessment Method	Target Score	Average Score	Achievement Degree
1) Knowledge Objective. Be familiar with primary principles and prevailing practices of international business and trade activities, including effective writing skills for international business communications, international trade communications, basic international business messages, proposals and reports, and employment communications.	Class Performance	2	1.85	0.893
	Operational Expansion	2	1.80	
	Communication Practices	5	4.55	
	Final Exam	10	8.87	
2) Primary Ability Objective. Be able to write standardized business letters and other messages, including business letter writing in the major steps of import and export activities, basic international business messages, proposals and reports, employment communication messages with good English skills.	Class Performance	2	1.86	0.903
	Operational Expansion	8	7.24	
	Communication Practices	5	4.54	
	Final Exam	10	9.00	
3) Advanced Ability Objective. Be able to comprehensively apply international communication messages-writing and oral-presentation skills and strategies to communicate effectively with international clients in English context.	Class Performance	3	2.45	0.923
	Operational Expansion	5	4.55	
	Communication Practices	5	4.62	
	Final Exam	15	13.92	
4) Quality Objective. Be able to demonstrate an international vision in the diverse cultural context, and be able to possess a high level of humanistic accomplishment and sense of social responsibility, demonstrate professional ethics, norms, country-belonging feelings, benevolence, and other relative core values in international business communication practice.	Class Performance	3	2.56	0.931
	Operational Expansion	5	4.67	
	Communication Practices	5	4.65	
	Final Exam	15	14.01	

5. Conclusion

Based on the OBE-PAD concept, an attempt has been made to reverse outcome-oriented and student-centered teaching design. Taking “International Business Communication” as an example, the paper focuses on the research and practice of the teaching assessment system. After a new assessment scheme is applied to the curriculum system, the classroom atmosphere of teaching, students’ interest in learning, practical ability and core value cultivation have been largely promoted. Students have changed from passive acceptance to active exploration of knowledge, and the teaching effect has been significantly improved; in addition, students’ analyzing and problem-solving abilities have been greatly improved.

Supporting Projects

1) Key Project of Education Reform of Beijing Institute of Petrochemical Technology: “Student-centered” Teaching Reform of “International Business Communication” Course Based on the Integration of OBE Concept and PAD Model (ZDXSZX202204003).

2) Key Project of Education Reform of Beijing Institute of Petrochemical Technology: Research on the Teaching Reform of “Theory and Practice of Cross-border E-Commerce” Course Based on OBE Concept (ZDFSGG202104002).

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Bai, Y. H. (2019). Research and Practice on Formative Evaluation of Curriculum Objectives under the Background of Engineering Education Certification. *China Higher Education Research*, 12, 60-64.
- Li X. K., Deng, L. (2016). On CDIO Ability Training and Assessment Reform of Database Course. *Computer Education*, 11, 141-143, 148.
- Li, J., & Tan, Y. (2017). Application of Achievement-Oriented Education in the Cultivation of Core Competence of Law Students. *Journal of Liaoning University of Technology (Social Science Edition)*, 19, 120-122.
- Li, X. L., Yan, H., Kui, X. Y. et al. (2020a). Teaching Reform and Practice Based on OBE Concept—Taking “Database Technology and Application Course Design” as an Example. *Industrial and Information Education*, 11, 62-66.
- Li, Y. F., Pan, X. O., & Wang, E. F. (2020b). Exploration and Practice of Chain Mixed Teaching under OBE Education Concept. *Heilongjiang Education (Theory and Practice)*, 11, 73-75.
- Liu L., & Li, Y. (2022). Teaching Paradigm Reform of Economic and Management Courses Based on the Integration of OBE Concept and PAD Mode. *Advances in Applied Sociology*, 12, 470-483. <https://doi.org/10.4236/aasoci.2022.129036>
- Liu, L. (2022). “Student-Centered” OBE-PAD Teaching Model and Practices—The Case of International Business Communication Course. *Open Journal of Social Sciences*, 10,

99-109. <https://doi.org/10.4236/jss.2022.1010007>

- Qiu, A. M. (2016). The Concept and Practice of “Split Class” Teaching Mode. *Journal of Guangdong University of Foreign Studies*, 27, 140-144.
- Sun, C. M., Du, H. M., Li, X., & Shi, Y. H. (2022). Research on Teaching Mode of Intelligent Control Course Integrating OBE and PAD Concepts. *Research on Higher Engineering Education*, 1, 157-162.
- Wang, B. J., Wu, T. H., Duan, Y. G. et al. (2020). Experimental Teaching Quality Evaluation System Based on Engineering Education Certification. *Laboratory Research and Exploration*, 39, 149-152, 181.
- Zeng, X. P., Jiang, X. L., Wang, D. W. et al. (2019). Design and Practice of Course Evaluation Scheme Based on Engineering Education Certification—Taking Polymer Physics as an Example. *Polymer Bulletin*, 12, 60-65.
- Zhang, X. X. (2014). Split Class: A New Exploration of College Classroom Teaching Reform. *Fudan Education Forum*, 12, 5-9.