

Curriculum Reform of Marketing Major in Undergraduate Colleges based on OBE Theory and Bloom Theory: Taking the Course of "Market Research and Forecasting" as an Example

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Abstract

The quality of curriculum teaching determines the quality of training talents. The existing curriculum system is out of reality to a certain extent, and it is inconsistent with the needs of enterprises. In order to improve the quality of teaching for undergraduates, the reform proposes a framework of curriculum reform model. The model is based on OBE theory and Bloom theory. The model takes the view of "student-centered, outcome-oriented, and continuous improvement", and pays more attention to improve students' ability to apply, evaluate and create knowledge and skills in learning. The reform takes the core course "Market Research and Forecasting" as an example. It proposes that the design of the curriculum system in colleges and universities must respond to Enterprise needs, the Enterprise needs determine the talent training objectives, the talent training objectives determine the graduation requirements, and the graduation requirements determine the curriculum system. At the same time, each course goal in the curriculum system should effectively support the graduation requirements, and the students' expected learning outcomes should be able to achieve the course goal. After setting the course objectives and establishing the expected learning outcomes of the course, the team of teachers should design the course content, use smart teaching methods and various teaching methods to implement the course teaching, evaluate the students' learning outcomes with diversified means, and continuously improve course teaching according to the degree of achievement of the course objectives.

Keywords

OBE Theory; Bloom Theory; Curriculum Reform; Market Research and Forecasting.

1. Research Background

With the rapid development of China's economy, the demand for talents is more urgent. Enterprises tend to choose talents with professional knowledge and practical experience to quickly integrate into the daily operation of enterprises. This trend has launched a new round of challenges to traditional universities, which means that traditional universities need to carry out teaching reforms based on the needs of Enterprise development and the characteristics of students. In 2019, the "Opinions of the Ministry of Education on Deepening the Reform of Undergraduate Education to Comprehensively Improve the Quality of Talent Training" proposed that colleges and universities should "comprehensively improve the quality of curriculum teaching". Curriculum teaching should be based on the needs of Enterprise development and talent training objectives, and the teaching reform should realize the transformation from teacher-centered to student-centered, and from focusing on student score to focusing on student learning outcomes.

"Big data" is rapidly changing the internal and external environment of enterprise. Innovative models based on big data and the Internet have brought huge challenges to enterprises' marketing concepts, business processes, and marketing decisions. More and more Enterprises

are devoting themselves to mining valuable consumer information from big data and carrying out "user portraits" to implement "precision marketing". Undoubtedly, the arrival of the big data era has put forward a strong demand for big data marketing talents. The ability to process and analyze massive marketing data is highly valued by enterprises, and mining the business value hidden behind the data is the ability that marketing talents should have. The existing curriculum system is out of reality to a certain extent, and it is inconsistent with the needs of enterprises.

Guilin University of Electronic Science and Technology is located in Guilin City, a world-famous tourist city with mountains and rivers. Its business school began the project of "the reform of the training model of big data marketing talents based on the OBE theory" in 2020, aiming to realize the transformation of the teaching philosophy of marketing major from "teaching-centered" to "learning-centered", from "knowledge system-centered" to "Learning outcome-oriented", and reconstruct the curriculum of marketing major System, and make marketing professional education focus on "the ability of big data marketing talents " in the new era.

2. Research Significance

The curriculum reform aims to improve the quality of teaching for undergraduates, embody the basic principle of "student-centered", and change the situation of "the whole class teaching". In terms of teaching methods, the curriculum reform would strengthen course content design, put an end to the phenomenon of simply passing on knowledge and ignoring ability training, put an end to the simplification and formalization of the application of information technology, put an end to the phenomenon students have information spoon-fed to them, and pay more attention to students' learning outcome.

3. Theoretical Basis of Curriculum Reform

3.1. Spady's Theory of Outcome Based Education

In 1994, Spady put forward the theory of Outcome Based Education. OBE (Outcome Based Education) refers to an educational model that clearly focuses on organizing teaching activities and the key results obtained by all students after a certain period of study. This means having a clear vision of the learning outcomes that students can achieve before the educational activity begins, and ensuring that the intended learning outcomes are achieved requires designing the curriculum, organizing instruction, and conducting assessments that focus on continuously improving each student's ability to reach the highest level prior to graduation. There are three core philosophies of OBE. The first core philosophy of OBE is student-centred. The philosophy emphasizes on stimulating students' learning motivation, and the teaching objectives revolve around the abilities students should have, and the teaching content revolves around the acquisition of students' abilities. Teachers and teaching resources support the achievement of students' learning results, and the object of teaching evaluation is the students' learning effect. OBE points to the future career development of students, so that students can fully adapt to changes and become people with fully developed personalities. The second core philosophy of OBE is outcome orientation. OBE emphasizes on the key results related to the curriculum, and attaches importance to the connection of the curriculum with real needs and experiences. Learning outcomes are things that can be done after learning, not just knowing or understanding. The learning outcomes should be visualized and observable, and they are needed in life and work situations to enable students to succeed. The third core philosophy of OBE is continuous improvement. Continuous improvement requires the selection of teaching strategies according to students' learning needs, desires, and foundation, and it also requires the design of teaching based on continuous analysis of students' learning needs, and uses effective teaching evaluation to provide a basis for further learning improvement. In short,

continuous improvement is reflected in the improvement of students' learning effect. Based on the theory of OBE, students' learning outcomes focus on the changes in students' knowledge, skills, attitudes and values, and pay attention to the subtle consideration of students' ability. The progress of assessment methods and strategic tools makes this subtle consideration possible. At the same time, the course objectives cover the corresponding completion requirements, the teaching content and method which support the course objectives. The teacher-oriented assessment evaluates the achievement of course objectives, and the student-oriented assessment focuses on assessing students' learning results, which are interlinked and mutually supportive. The whole teaching should realize the transformation from the original linear advancement to the cyclic improvement, and pay attention to the continuous improvement of the whole teaching process, which reflects the characteristics of the the total quality management.

3.2. Bloom's Taxonomy of Educational Objectives Theory

In 1956, Benjamin Bloom, a famous American psychologist and educator, classified educational objectives in "Taxonomy of Educational Objectives: Cognitive Domain". He divided educational objective in cognitive domain into six categories: knowledge, comprehension, application, analysis, synthesis, and evaluation. In 2001, the famous American curriculum experts Anderson and Krathwall jointly revised Bloom's taxonomy of educational objectives, and divided knowledge into four types: factual knowledge, conceptual knowledge, procedural knowledge and meta-cognitive knowledge. At the same time, according to human cognitive process and cognitive laws, the cognitive process is divided into six dimensions: Remembering, Understanding, Applying, Analyzing, Evaluating and Creating. These six dimensions provide a "measuring ruler" for measuring learning outcomes. The measurement of student learning outcomes should focus on higher-order cognitive abilities such as analyzing, evaluating, and creating, allowing students to learn to apply what they have learned, rather than simply relying on "memory" to demonstrate what they have learned. Through analysis, evaluation and creation, students acquire the ability to apply knowledge, and acquire the ability to solve complex professional problems and to innovate.

4. A Framework of Curriculum Reform Model

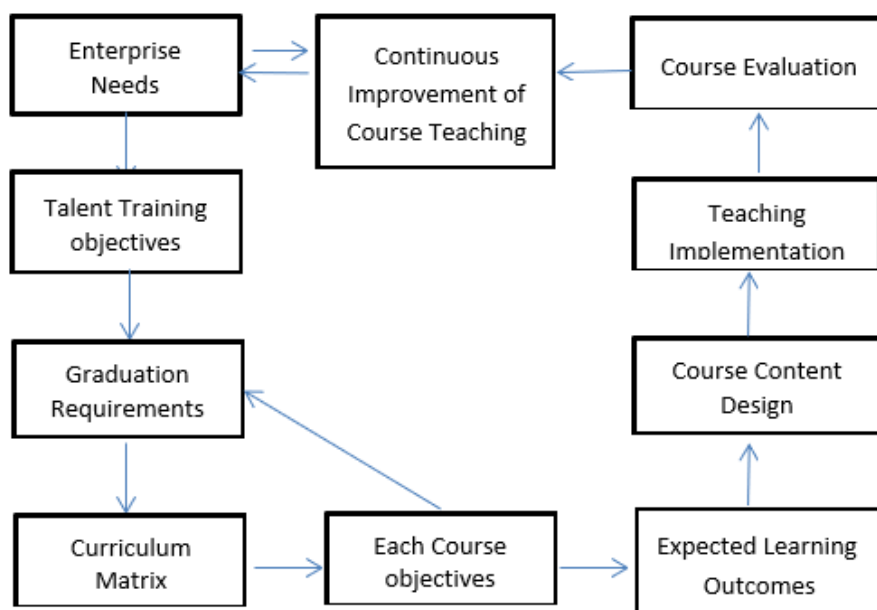


Figure 1. Curriculum Reform Based on OBE Theory and Bloom Theory Model

The outcome based education follows the principle of reverse design. As we can see from figure 1, the design of the curriculum system in colleges and universities must respond to Enterprise needs, the Enterprise needs determine the talent training objectives, the talent training objectives determine the graduation requirements, and the graduation requirements determine the curriculum system. At the same time, each course goal in the curriculum system should effectively support the graduation requirements, and the students' expected learning outcomes should be able to achieve the course goal. After setting the course objectives and establishing the expected learning outcomes of the course, the team of teachers should design the course content, use smart teaching methods and various teaching methods to implement the course teaching, evaluate the students' learning outcomes with diversified means, and continuously improve course teaching according to the degree of achievement of the course objectives. In this way, the quality of teaching can be spiraled upwards, and the ability of students can be continuously improved. It should be emphasized that the establishment of curriculum teaching objectives requires the application of Bloom's Taxonomy of Educational Objectives theory, which divides the learning objectives of professional knowledge into six dimensions: memory, understanding, application, analysis, evaluation, and creation.

5. Course Reform Process of "Market Research and Forecasting"

The following is an example of the curriculum reform of the core course "Market Research and Forecasting" for marketing majors to explain the curriculum reform in detail. The course reform process is carried out according to the above curriculum reform model.

5.1. Enterprise Needs of Big Data Marketing Talents

In December 2021, the State Council issued the "14th Five-Year Plan for the Development of Digital Economy", proposing that by 2025, the digital economy will move towards a period of comprehensive expansion, and the proportion of the added value of the core industries of the digital economy in GDP will increase from 7.8% in 2020 to 10% in 2025. At the same time, it is proposed to "improve the level of digitization in the business field and guide traditional business formats to carry out online and offline, customized and precise marketing innovations". This shows that enterprises have an urgent need for big data marketing talents during the 14th Five-Year Plan period. With the development of the Internet and mobile Internet, enterprises have generated massive user data, and the rapid development of computing power has led to the need for enterprises to apply big data technology for business analysis and decision-making. Enterprises should establish a customer-centric marketing strategy and conduct customer insight. Enterprises need to reduce marketing costs and improve marketing efficiency. Enterprises need to respond to users in real time and accurately measure the marketing effect so as to bring a higher return on investment to the enterprise. This requires big data marketing to gain insight into needs, develop new markets, draw user portraits, locate target group and accurately push advertisements to target users so as to improve user experience and enhance customer relationship management. Big data marketing has become an important part of corporate marketing work, and Enterprises have shown a strong demand for big data marketing talents.

5.2. Training Objectives and Graduation Requirements for Big Data Marketing Talents

Based on the needs of enterprises for big data marketing talents, this teaching reform will set the training objectives as follows. The marketing talents should have a solid foundation of management science, master the knowledge and methods of modern economic management, have a certain international vision, innovation consciousness, team spirit and communication skills. Graduates can engage in business planning and business analysis and work in various

enterprises. At the same time, Graduates should have the following professional skills. Firstly, big data marketing talents should have big data marketing thinking, be able to use big data technology to mine and analyze marketing data. Secondly, big data marketing talents should have multi-disciplinary professional knowledge in computer science, marketing and statistics, be able to comprehensively use the theories and methods to investigate, plan, implement and evaluate marketing issues such as business planning, business analysis and so on. Thirdly, big data marketing talents should have good professional ethics and Teamwork spirit, be able to continuously expand knowledge and ability through continuous learning. Lastly, big data marketing talents should have an international vision and have a certain sense of innovation. Graduates of marketing major should meet the graduation requirements, which specifically include 10 aspects. In a word, graduates should master the basic theory of management, economics and modern marketing, analyze marketing problems and design solutions.

5.3. Curriculum Matrix and Course Objectives

Table 1. The course objectives of "Market Research and Forecasting"

The Course Objectives	Objective Dimension
1. Understand the concepts of market Research and forecasting, understand the ecology of the market research industry, understand professional ethics of market researchers, apply teamwork Communication methods and team cooperation methods so as to successfully complete the task of market research projects.	3 understanding dimension objectives. 1 applying dimension objective.
2. According to the background of the marketing problem and the needs of consumers, correctly analyze the business problems and design a market research plan and propose solutions to the problems investigated in the form of group cooperation.	1 analyzing dimension objective. 1 creating dimension objective.
3. Apply survey methods and sampling methods, including secondary data survey, questionnaire survey, observation method, experimental method, random sampling, non-random sampling and so on to collect data correctly.	1 applying dimension objectives. 1 creating dimension objective.
4. Comprehensively apply mathematical and statistical methods to analyze marketing data related to marketing issues, build models, and apply computer software such as SPSS software to process, mine, and analyze the collected data to obtain effective market research conclusions	2 applying dimension objectives. 2 analyzing dimension objectives.
5. Design market research report, evaluate market research report, and apply the findings to guide marketing practices.	1 applying dimension objective. 1 evaluating dimension objective. 1 creating dimension objective.

After the training objectives and graduation requirements are determined, the reverse design is then carried out to set up a curriculum matrix. This requires comprehensively sorting out the content of professional courses, integrating course resources, reducing courses with low support for graduation requirements, eliminating "water courses" and creating "golden courses". Finally, a one-to-one correspondence between courses matrix and graduation requirements is formed to ensure that all graduation requirements can be found in the curriculum matrix to find their implementation courses. That is to say, according to the graduation requirements, the curriculum system can form support, the course teaching can realize the support, and the course assessment can prove the support.

Based on the OBE Theory and BLOOM Theory, this reform resets the course objective of "Market Research and Forecasting". Table 1 shows that the course objectives are divided into 5, corresponding 3 understanding dimension objectives, 6 applying dimension objectives, 3 analyzing dimension objectives, and 3 creating dimension objectives. At the same time, the course objectives should support the graduation requirements. Table 2 reflects the degree of support of the curriculum objectives of "Market Research and Forecasting" for each graduation requirement.

Table 2. Correspondence between course objectives and graduation requirements

Graduation Requirements	No.1 Objective	No.2 Objective	No.3 Objective	No.4 Objective	No.5 Objective
No.2 Identify marketing issues.		√			
No.4 Analyze marketing issues.		√	√	√	√
No.6 Apply data acquisition, processing and analysis software and other tools.				√	
No.7 Understand Occupational norms.	√				
No.8 Teamwork to solve marketing problem	√	√			√

5.4. Expected Learning Outcomes and Course Content Design

Teachers design expected learning outcomes based on course objectives. Expected learning outcomes refer to the knowledge, ability and professional quality that students will have after completing the course, usually including three aspects: knowledge achievements, ability achievements and professional attitude achievements. The reform based on the OBE theory means that teachers expect students to be able to use these knowledge and skills flexibly and have a good professional attitude after completing the courses. Expected learning outcome is a combination of knowledge, skills, and job assignments. It is a statement of the mastery of knowledge and skills that students should know or understand or apply after completing a learning activity. It requires students to do behaviors that are observable and measurable. After designing the expected learning outcomes, teachers design the course content. On the one hand, the design of course content should be centered on the needs of the enterprise, and on the other hand, it should be able to achieve the expected learning outcomes.

Table 3. Correspondence between the part of course content, expected learning outcomes and course objectives of "Market Research and Forecasting"

Course Content	Expected Learning Outcomes	Course Objectives
No.5 Questionnaire and scale design ①Measurement and measurement scale; ②Questionnaire and questionnaire design; ③Attitude scale; ④Questionnaire reliability and validity; ⑤The case.	Students can be able to design questionnaires and scales a scientific and rigorous attitude.	No.3 course objective

5.5. Teaching Implementation and Course Evaluation

Teaching implementation should be student-centered and adopt a variety of teaching methods, such as project-based learning, problem-based learning, inquiry-based learning, research-

teaching integration learning, case teaching, practice and training and other teaching methods. At the same time, smart teaching methods such as rain classroom are used to attract and encourage students to actively study in order to achieve expected learning outcomes. Teachers become collaborators, facilitators and participants of students' learning. There is more interaction between teachers and students, and there is more cooperation between students. Teachers need to devote more time and energy to students' learning and participate more deeply.

If the course mainly assesses students' memory of professional knowledge, and they pass the exam with a score of 60, then the course learning will not be challenging and innovative, and it will also affect the students' learning attitude. Therefore, in order to change this single and inefficient course evaluation method, we should not be limited to the paper results of the final exam, but return to the learning process more. That is to say, course evaluation need to change from result-based evaluation to process-based evaluation, which mainly evaluates the entire learning process of students, including the completion of learning tasks, the completion of homework, and presentation. In the reform, the course evaluation method encourages students to learn from teachers, books, teammates, and opponents in the learning process, and set target tasks and evaluation scores on the corresponding modules, focusing on assessing students to analyze problems and problem-solving ability to achieve the high-level objectives of the course such as assessing students' understanding of complex problems and the ability to comprehensively apply knowledge. In short, the course evaluation method is committed to improving students' thinking ability and innovation ability, focusing on assessing the process and results of students' knowledge acquisition, skill mastery, and attitudes. After finishing the course teaching, teachers should conduct a questionnaire survey for students about course learning. The questionnaire involves students' satisfaction with course and teachers, preference for teaching facilities, preference for course resources, willingness to communicate with teachers, course expectations, learning confusion and other suggestions. In addition, teachers need to evaluate the achievement of each course objective.

5.6. Continuous Improvement of Course Teaching

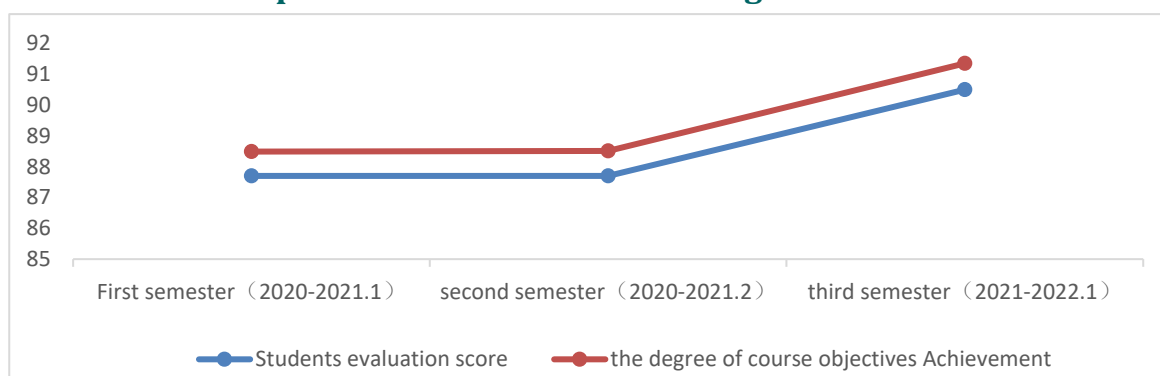


Figure 2. Continuous improvement of "Market Research and Forecasting"

The degree of achievement of course objectives and students evaluation score are two important indicators to evaluate the teaching effect of the course. This reform has gone through four semesters, and currently three semesters of relevant data have been obtained. Figure 2 shows the trends of these two indicators of the "Market Research and Forecasting" in three semesters. Teachers use two indicators to evaluate the teaching effect of the course, and then through student questionnaires, they can find problems in course teaching in time, provide data support for follow-up teaching, put forward teaching suggestions, and improve teachers' teaching. The idea of "student-centered, output-oriented, continuous improvement". This

process fully reflects the idea of "student-centered, outcome-oriented, and continuous improvement" in OBE theory.

6. Conclusion

With the rapid development of the social economy, the society has put forward new requirements for the cultivation of talents in colleges and universities, and the curriculum reform of marketing major is more important. OBE theory and BLOOM theory provide ideas for curriculum reform. OBE theory proposes the idea of "student-centered, outcome-oriented, and continuous improvement". BLOOM theory divides the cognitive process into six dimensions, including remembering, understanding, applying, analyzing, evaluating and creating. Curriculum reform should be student-centered, pay attention to the acquisition of students' learning outcomes and ability, pay attention to improve students' ability to apply, evaluate and create knowledge and skills in learning, and pay attention to improve the challenge and innovation of students' learning.

Business school of Guilin University of Electronic Science and Technology began the project of "the reform of the training model of big data marketing talents based on the OBE theory" in 2020. The curriculum reform is an important part of the project. It aims to improve the quality of teaching for undergraduates, embody the basic principle of "student-centered", and change the situation of "the whole class teaching". The reform proposes a framework of curriculum reform model. It means that the design of the curriculum system in colleges and universities must respond to Enterprise needs, the Enterprise needs determine the talent training objectives, the talent training objectives determine the graduation requirements, and the graduation requirements determine the curriculum system. At the same time, each course goal in the curriculum system should effectively support the graduation requirements, and the students' expected learning outcomes should be able to achieve the course goal. After setting the course objectives and establishing the expected learning outcomes of the course, the team of teachers should design the course content, use smart teaching methods and various teaching methods to implement the course teaching, evaluate the students' learning outcomes with diversified means, and continuously improve course teaching according to the degree of achievement of the course objectives. The reform takes the core course "Market Research and Forecasting" as an example, and the results show that Curriculum Reform Based on OBE Theory and BLOOM Theory can improve the teaching quality of the course, improve students' abilities. Students have more learning outcomes.

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