Big Data Marketing Teaching Analysis based on OBE and Hybrid Teaching

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Abstract
With the rapid development of information technology, informatization has gradually become the characteristics of the times. The deep integration of information technology and education has led to the reform of teaching methods. On the other hand, information technology promotes the transformation and development of the automobile industry, which contains the new demand for talents of enterprises. Marketing Education under the background of big data focuses on how to combine information technology with traditional teaching reform to cultivate high-quality marketing talents in line with the needs of enterprises. Curriculum and teaching are the most direct and key factors to determine the quality of personnel training. The OBE education concept of student-centered and result oriented curriculum reform is very consistent with the target demand of big data marketing talent training, and has been widely concerned and studied in China’s engineering education teaching reform. In practice, blended teaching based on information technology has become a hot issue in teaching reform. Based on this, this study focuses on big data marketing major, and explores the application of hybrid teaching big data marketing course teaching. This paper analyzes the relevant theoretical background, points out the existing problems and the significance of the research, and plans the next stage of work.

Keywords
Big Data; OBE; Marketing.

1. Theoretical Background

(1) OBE concept
OBE (outcomes based education) is also called goal oriented and ability oriented. The concept of achievement oriented education is different from that of traditional discipline oriented education. The curriculum and teaching under the guidance of this educational concept starts from the demand, determines what students want to learn according to the ability requirements of enterprises for talents, anticipates learning results, locates teaching objectives, reconstructs course content, designs and implements Teaching process. Teaching design always focuses on students as the main body, focusing on what students learn and what they have learned rather than what teachers teach. It emphasizes the cultivation of knowledge, ability and quality that students really need after graduation. "Student centered" and "competency based" are the guiding principles of teaching design based on OBE concept.

(2) Blended teaching
Blended teaching comes from the English word "blended learning". Although there have been many years of research on Blended Teaching at home and abroad, there is no clear definition of blended teaching. With the change of times and the development of information technology, blended teaching has different connotations in different periods. For the concept of "blended teaching", this study believes that blended teaching is an online and offline teaching mode based
on mobile teaching platform, which combines the advantages of traditional classroom teaching and online network teaching. Blended teaching is not a simple combination of online teaching and offline teaching, but a learning process of combining various teaching theories, teaching strategies and teaching resources to create a hybrid learning environment in which students are highly involved, stimulate students' interest in learning, guide students to construct their own shallow knowledge, and promote the cultivation of high-level ability.

2. Practical Problems

(1) The practical requirements of traditional teaching mode for big data marketing talents

Generally speaking, big data marketing is to collect a large number of behavioral data through the Internet to help advertisers find the target audience, so as to predict and allocate the content, time and form of advertising to complete the marketing process of advertising. Big data has brought great challenges to traditional marketing communication activities. Enterprises' enthusiasm and demand for new big data analysis and prediction technology talents are surpassing traditional business intelligence and information management talents, and the talent gap of big data will continue to grow in the next five years.

At present, many domestic colleges and universities marketing major began to big data marketing transformation. However, under the traditional discipline oriented education concept and the traditional marketing teaching model, teachers pay more attention to the inculcation of knowledge, and do not pay attention to the improvement of students' ability, and whether the students obtain the corresponding ability finally. OBE education concept is different from the traditional discipline oriented education concept, which pays more attention to what students can do after completing the school study, which is very in line with the needs of big data marketing talent training objectives. It has been widely concerned and studied in China's engineering education reform. Therefore, we put forward the big data marketing teaching mode based on OBE theory, focusing on the acquisition of students' ability, including knowledge acquisition ability, expansion ability, problem-solving ability, the formation of cooperation spirit, and the improvement of expression ability. The assessment should examine the achievement of learning achievements and expected goals in a diversified way.

(2) The challenge brought by the renewal of teaching content and teaching means

Unlike traditional marketing, which focuses on face-to-face offline communication, big data marketing pays more attention to the influence of consumers' Online + offline behaviors. This requires students to master the traditional marketing skills, but also need to learn and master more online user behavior data collection, analysis and processing capabilities. This means the expansion of big data marketing in the teaching content, but also puts forward new requirements for the diversification of teaching methods.

Under the background of "Internet plus", the hybrid teaching mode is based on mobile teaching platform, and combines traditional classroom teaching with online teaching advantages, and advocates the full use of various cyber source. The characteristics of hybrid teaching also coincide with the characteristics of diversified data sources in big data marketing practice teaching. Therefore, how to effectively introduce the OBE and hybrid teaching concept into the teaching reform of big data marketing has become a problem worthy of attention.

3. Research Significance

This study has carried out theoretical and practical research on OBE and blended teaching theory under the background of "Internet plus" big data marketing. The concept of big data marketing is a new direction derived from the rise of big data specialty in recent years. Different from the traditional STP marketing theory, big data marketing pays more attention to the
interaction between users rather than the transaction behavior of customers. That is, the user is the output of information, not just the receiver. As shown in the figure below

![Figure 1. user interaction under virtual community in the field of big data marketing](image)

This feature of big data marketing coincides with OBE's "student-centered" and the teaching concept of making full use of Online + offline teaching mode in blended teaching. Under the traditional teaching mode, the focus is on teachers and students' one-way vertical knowledge output. Teachers pay more attention to the process, and pay more attention to the inculcation of knowledge, but do not pay attention to the improvement of students' ability, and whether the students obtain the corresponding ability in the end. In the process of OBE and blended teaching practice, we pay more attention to the two-way horizontal information exchange between students, that is, whether students have the ability to share knowledge output.

Based on the theory of social existence and social impact, in big data marketing, users are no longer regarded as independent individuals, but as a community with certain relevance. The association between users is a kind of "social existence", which will bring about corresponding "social influence", which will affect the behavior of individual users. We found that students in the learning process, in addition to the impact of teachers, will also be affected by the students around them.

Therefore, we can extend the concept of user community in big data marketing to OBE and hybrid teaching, build an online learning community, and promote knowledge sharing among users in the learning community. And to explain why the OBE + mixed teaching mode can better stimulate students' information exchange, and make them have the corresponding knowledge. To sum up, this study puts forward the idea of big data marketing curriculum reform (what) based on OBE and hybrid teaching concept, which provides practical basis for the feasibility of Hybrid Teaching in the process of professional transformation. At the same time, through the corresponding theory (why), why based on OBE and blended teaching concept is effective? To a certain extent, the theory of OBE and blended teaching is expanded.

4. Main Contents

(1) Through the research on the related literature of "OBE concept" and "blended teaching", this paper analyzes the existing research results and existing problems.
(2) This paper analyzes the curriculum and teaching situation of marketing major in Colleges and universities in and out of the District, and analyzes the causes of the problems.
(3) This paper investigates the current situation of enterprise demand for big data marketing talents, analyzes the post content and ability requirements of personnel engaged in big data marketing, determines the core objectives of marketing curriculum system, reconstructs the
OBE + based hybrid teaching design mode and teaching implementation mode, and designs and develops hybrid online teaching resources.
(4) Analysis on the employment situation of marketing majors, the matching degree between curriculum system and market skill demand (Taking Guilin University of Electronic Science and technology as an example);
(5) And the application of mixed teaching in marketing teaching.

5. Reform Objectives

(1) This paper analyzes the training objectives, curriculum content and curriculum structure of marketing professionals in Colleges and universities both inside and outside the District, so as to understand the ideal state of the current marketing professional curriculum.
(2) Through the investigation on the learning needs of marketing majors in the case College (Guilin Electronic Science and technology great peace of mind), the understanding survey of professional teachers of graduation class on the curriculum setting of marketing major, and the questionnaire survey and interview conducted by employers on the demand of big data processing and analysis ability of marketing graduates, we can understand the marketing curriculum design in and out of the area Actual status.
(3) Through the summary and analysis of the ideal state of marketing curriculum setting and the actual situation of case colleges and universities, this paper puts forward the reform plan of marketing professional course with OBE + mixed teaching mode as the foothold. Through the summary of the ideal state and the actual state, this paper points out the problems existing in the curriculum of marketing major in Guilin University of Electronic Science and technology, analyzes the problems and causes them, and puts forward suggestions for improvement based on the OBE + mixed teaching theory and the specific situation of Business School of Guilin University of Electronic Science and technology.

6. Research Methods

(1) Literature research
Firstly, through the research and analysis of the literature about "OBE concept" and "blended teaching" at home and abroad, this paper summarizes the research methods used in the previous related research and the research conclusions, so as to provide reference for the research hypothesis and the selection of research methods in this study.
(2) Questionnaire survey
In this study, we focus on 1) The current situation of curriculum setting of marketing major inside and outside the district; 2) the ability demand of enterprises for big data marketing talents; 3) the docking of marketing courses and market demand inside and outside the district (Taking Guilin University of Electronic Science and technology as an example); 4) analysis of the employment situation of Marketing Majors inside and outside the district (Taking Guilin University of Electronic Science and technology as an example); and 5) the application of OBE + mixed teaching in marketing courses The present situation and other five aspects of the problem are used to conduct preliminary judgment and final verification of the hypothesis and conclusion.
(3) Statistical analysis
In this study, in addition to the statistical analysis of the first-hand data obtained in the questionnaire survey, more statistical analysis is used in the quantitative analysis and statistical test of users’ online learning behavior data in the process of Online + offline hybrid teaching. The statistical methods used in this process are: correlation test, t test, analysis of variance and factor analysis. The statistical tool is spss19.0.
(4) Text analysis
The purpose of text analysis is to describe, compare and summarize the general situation and improvement methods of marketing curriculum. The experimental tool is COH metrix text analyzer. COH metrix is an online text analyzer developed by Memphis University in the United States. It can extract multiple variables from text by using computational linguistics, corpus linguistics, information retrieval and other natural language analysis technologies. These variables involve the cohesion and continuity of the text, syntactic complexity, lexical information, concept clarity and other aspects.

(5) Case study
The purpose of the case study is to further test the five questions, which are used to make preliminary judgment and ultimately verify the hypothesis and conclusion.

7. Innovations

The innovation of this study is mainly reflected in four aspects: research problems, theoretical expansion, data sources and method application.

(1) Research problems: Taking the transformation of big data marketing major in Guangxi University as the research object, this paper discusses the problems existing in the transformation and development process of marketing major, and puts forward the reform scheme by using the OBE + mixed teaching mode.

(2) Theoretical expansion: in the current research of teaching reform, only focus on the phenomenon (what) - introducing some new teaching methods or ideas, but not in-depth explanation of the internal mechanism and reasons (how + why) of these new teaching methods and ideas. This topic intends to use the social network theory, social existence theory and social impact theory involved in the field of big data marketing to reveal why the learning effect is better in the learning community under the OBE and mixed teaching mode? This paper extends the theory of OBE + blended teaching.

(3) Data sources: except for collecting first-hand questionnaire data (such as students' understanding and cognition of majors) by using online questionnaire tools (such as questionnaire stars) and field visits to relevant enterprises and universities to obtain survey data (such as enrollment situation and employment rate of marketing majors in Colleges and universities in and outside the district). This study attempts to collect second-hand data for research and analysis, such as using crawler software (Locomotive collector, octopus collector, etc.) to collect market demand data on open-source websites such as 51job, fresh student job search website, 58 city, etc., and build an index system that can reflect the market demand. In the research of mixed teaching mode, the background data of MOOC and other online teaching websites are collected for the analysis of students’ online learning behavior. The data dimension is richer and the credibility is higher.

(4) Methods and applications: while adhering to the research idea of qualitative analysis of sociology, this paper tries to adopt the research method of management science, based on theoretical modeling, to collect data for quantitative analysis. The relationship between the variables of the research model, as well as the different effects of independent variables, regulatory variables and intermediary variables on the dependent variables were clarified. In this paper, the author believes that market demand is the main variable, that is, the independent variable. Government policy regulation, student source quality, school teaching environment and teaching staff are the moderating variables, the students’ learning situation is the intermediary variable, and the final talent training program and curriculum setting are the dependent variables. Through this research, we can make clear the causal relationship between variables and provide more accurate, real and reliable research conclusions. For example, what kind of adjustment mechanism (teaching environment, teaching staff, etc.) of the known
8. Key Issues to be Solved

(1) After graduation, the knowledge used in employment and the knowledge learned in school are organically linked.

(2) Build teaching evaluation mechanism based on Internet plus, college students’ innovation and entrepreneurship competition, etc., improve the skills competition guarantee system, and skills competition talent training program.

(3) Based on the OBE + mixed teaching mode, optimize the curriculum structure of marketing major, increase the intensity of practical training hours, improve the theoretical knowledge of students, and comprehensively improve the practical ability of students and the professional ability corresponding to the occupation post.

(4) We should strengthen the integration of production and education, school enterprise cooperation, let the enterprise society participate in the training of marketing professionals, work out the talent training plan with enterprises, optimize the course content, and comprehensively improve the practicability of the course and the strength of integrating with the market and enterprises.

9. Basis of Teaching Reform

In recent years, project applicants and team members have been engaged in network marketing research, actively tracking complex network analysis, web crawler, community evolution, community key user analysis and other related technologies. Through reading a large number of domestic and foreign literature, we have a deep understanding of the user participation behavior in the virtual community platform, summarized and written, and published in SSCI, SCI, EI, CSSCI, CPCI, Chinese core and other journals. The age, professional title, major and academic background structure of the members of the research group are reasonable. I have my own opinions on the problems discussed in this project, and have the basis of cooperation, and can coordinate the work well.

10. Working Environment and Conditions

(1) Laboratory construction.

The Business School of Guilin University of Electronic Science and technology, the applicant’s unit, has three experimental centers: enterprise virtual operation experimental teaching center, production and operation experimental center, and e-commerce experimental center. Among them, the enterprise virtual operation experimental teaching center is the autonomous region level experimental teaching demonstration center, with five laboratories: enterprise panoramic simulation laboratory, enterprise information laboratory and sand table model There are two laboratories in the production and operation Experimental Center: Industrial Engineering Laboratory and human factors engineering laboratory; three laboratories are set up in the e-commerce experimental center: e-commerce laboratory, information economy laboratory and financial trade laboratory. These laboratories can meet the needs of online teaching platform users for social network collection, analysis, data mining and experimental simulation.

(2) Data resource acquisition.

The applicant of this project has a long-term cooperative relationship with China marketing engineering and innovation research center of Wuhan University. Relying on the cooperation units of China marketing engineering and innovation research center of Wuhan University, such
as Baidu and Netease, the internal data sharing and cooperative research can be realized in the case of data desensitization. At present, the center not only has a million-user consumer database of traditional enterprises, but also obtains massive user log data through cooperation with online education institutions and enterprises, and reconstructs the user complex network model to solve the construction and analysis problems of the early big data resource platform, which provides a solid foundation for the research on user participation behavior of the teaching platform of this project Foundation. In addition, Guilin University of Electronic Science and technology has a rich collection of books. In addition to books, newspapers, journals and other documents, it has also opened VIP and CNKI, making it convenient to access materials. The applicant’s unit has set up a number of online courses. Based on the online teaching platform such as MOOC, the online learning behavior data of users can be effectively obtained. In addition, the project applicant has a long-term cooperative relationship with the project manager of Danei technology Guangxi branch. Relying on the online learning platform of Danei technology, we can obtain the online learning behavior data of the students of the Institute, and provide more dimensional data sources for this project.

11. Missing Conditions and Solutions

During the project, we will apply for the college's laboratory to search for electronic materials, apply for the college’s multimedia classroom for knowledge exchange and discussion, purchase relevant books, books and journal papers to learn about the latest application of the OBE + blended teaching method in various disciplines, and investigate the implementation status of online teaching in brother colleges in the region, and plan to make a questionnaire for the students in the school In order to achieve further innovative research, we design the training mode and adjust the results of curriculum system.

12. Specific Implementation Plan (Including Annual Progress)

(1) Project investigation and demonstration stage (December 2020 to December 2021)

Taking undergraduate colleges, well-known enterprises and social training institutions in Guangxi as the research objects, this paper summarizes and analyzes the successful experiences and shortcomings of marketing major in specialty construction, talent training program, teaching reform, integration of production and education, school enterprise cooperation, and construction of education platform, etc., so as to understand the differences and similarities of talent training requirements in different regions and colleges. We will follow up and return visit the graduates of marketing major from 2017 to 2020 to understand their employment and entrepreneurship, fully understand the current social and economic development and the demand for big data marketing talents, put forward the reform methods and means for research and implementation, and carry out the reform pilot of marketing specialty construction.

(2) Project implementation stage (2021.1-2022.3)

This paper summarizes the construction of education platform for marketing major, teaching staff of marketing major, output of scientific research achievements, student competition and integration of production and teaching in Guangxi undergraduate colleges and universities, and takes them as reference objects. Taking 2017-2020 students majoring in marketing in Guilin University of Electronic Science and technology as the research object, the paper carries out the innovation of mixed teaching mode based on OBE + and gradually carries out case-based, heuristic and research-based teaching. Driven by project + professional competition, innovative courses based on horizontal topics are set up, and various skills competitions are organized and participated. Make full use of the advantages of relevant cooperative enterprises in R &amp; D, technology, market, training and other advantages, build a talent training program focusing on post ability training, formulate industry talent training standards, realize the technical tracking
of college teachers, and deepen the cultivation of students' engineering application practical ability, so as to jointly formulate a set of talent training scheme to meet the needs of marketing major industry. Referring to the curriculum of social training institutions (such as Danai Technology), we should focus on the reform of talent training programs and teaching staff, focus on the reform of main courses, update and integrate teaching content, revise the syllabus, reform teaching methods and assessment methods, deepen the intensity of industry education integration and school enterprise cooperation, and adopt the talent training mode of industry education integration + innovation and entrepreneurship; We should strengthen the reform and construction of the teaching staff, try out the construction of "double tutors", and highly integrate the school and enterprise teachers; carry out talent tracking research to track the long-term effect of talent training on the industry.

(3) Project completion stage (2022.3-2022.12)
This paper summarizes the research and practice of this project, publishes the thesis, compiles the teaching material, writes the final report, and accepts the acceptance.

13. Feasibility Analysis

(1) Brother colleges and universities in and out of the region have also generally carried out online teaching, which provides sufficient samples for the online + offline research of Hybrid Teaching in this project.

(2) It provides the possibility for users to interact with each other on the Internet.

(3) The experimental center of Business School of Guilin University of electronic technology provides hardware support for this project.

(4) The project team members have reasonable education background, age and professional title structure, have a solid professional theoretical foundation, and have strong experimental skills and scientific research quality.

(5) Among the members of the project team are the project managers from Danei technology Guangxi branch. Danei technology is a listed educational institution with a dedicated online teaching platform and has opened training courses related to big data marketing, which can provide users with online learning behavior data for the project. As a team leader, the applicant has established a good cooperative relationship with the relevant principals of danay technology Guangxi Branch, which will also help to carry out relevant research in this project.

In conclusion, through the literature preparation and work investigation related to the application of this project, we have a clear research idea and can complete the relevant research work according to the scheduled work plan.

14. Expected Results

(1) Form of achievements
One paper was published in the core journal, and one double qualified talent was trained; According to the characteristics of online teaching, we should formulate and optimize the talent training program of marketing specialty;
He has applied for one software copyright and one patent, and guided students to participate in more than three domestic discipline competitions.
1 Research Report and 1 implementation effect analysis report;

(2) Usage destination and expected social benefits
The research results of this project will be applied to the construction of marketing specialty in Guilin University of Electronic Science and technology and other colleges and universities in and outside the district.
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