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An exploration of teaching reform of management course based on rain class and participatory teaching under OBE concept

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Abstract: Management is the core course of business administration majors. In order to drive educational modernization through educational informatization, this article explores the teaching reform of management based on the concept of learning output education (OBE). It is guided by student output and follows the principle of "reverse design and positive implementation". In terms of implementation, it is specifically divided into learning goal reconstruction, course content integration The teaching process and the construction of an evaluation system are four steps. During the teaching process, the implementation of rain classroom and participatory teaching mode has broken through traditional time and space limitations, extending the interaction and communication between teachers and students from the classroom to pre class and post class, achieving a good loop of "pre class in class after class". This teaching reform practice can promote the improvement of the quality of management teaching and is conducive to cultivating high-quality management talents.

Keywords: *Management, Participatory teaching, Rain classroom, Results oriented education, Teaching reform.*

1. Introduction

Modernization of education is the current hotspot of education, and the important content of modernization of education is informatization, and at the same time, informatization is also an important way to promote the modernization of education (Cheng & Chen, 2023). China Education Modernization 2035" focuses on important issues in education development, emphasizes that education modernization should accelerate education change in the information age, realize the organic combination of large-scale education and personalized cultivation, and accelerate the reform of talent cultivation mode by using modern technology, etc. The document further elaborates that it is necessary to make full use of modern information technology to innovate the way of teaching and promote the practice of the philosophy of education and teaching 'centering on students', and promote the construction of online course resources and blended teaching mode in universities. The document further elaborates that it is necessary to fully utilize modern information technology to innovate teaching methods, promote the practice of "student-centered" education and teaching concepts, and promote the integration and development of the construction of online course resources in colleges and universities and the reform of hybrid teaching mode. This is of far-reaching significance for promoting the change and innovation of education mode and the deep integration of information technology and education teaching.

With the development of the Internet and the continuous improvement of the level of Informa ionization, the way of transmitting and acquiring knowledge is also changing, and the rainy classroom and participatory teaching are tools and concepts that are very much in line with the trend (Schmidt & Tang, 2020). In order to comprehensively analyze and evaluate the whole process of teachers' teaching and students' learning, to promote the application of information technology, to enrich teachers' teaching methods, to assist teachers in precise teaching and real-time improvement, to comprehensively

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improve the teaching effect, and to enhance students' awareness of independent and lifelong learning, this paper analyzes the use of the mode of participatory teaching based on the rain classroom intelligent teaching tools under the concept of OBE in the teaching of the course of "Management". This paper analyzes the use of this model in the teaching of the Management Science course under the OBE concept.

2. Correlation Theory

2.1. Rain Classroom

Rain Classroom is co-developed by Xuedang Online and Tsinghua University Online Education Office, which doesn't have to invest in hardware, but only needs to be mounted on PPT and WeChat, which are also common software in teachers' and students' computers and smartphones, and is characterized by fast start-up and easy learning. Before class, the teacher through the rain classroom to study videos, exercises and other pre-course materials pushed to the students; class, students can always put forward questions on the PPT courseware, the teacher at any time to answer, while students can through the rain classroom real-time answer questions, to complete the random test, the teacher can also be sent to the form of announcements to remind the students to submit their assignments in a timely manner, thereby promoting communication between teachers and students; after class, the teacher uses the rain classroom to students to After the lesson, teachers use Rain Classroom to send extension materials to students, and students can study by themselves according to their own abilities and interests.

As a new type of teaching means derived from the network era, Rain Classroom can realize the full coverage of each link in the teaching process (before class - during class - after class), promote the communication between teachers and students, increase the classroom interest, stimulate the students' interest in learning, and provide new ideas for teachers to continuously improve their teaching methods and innovate their teaching concepts. Rain Classroom is able to record all the teaching data in detail in the background system. Teachers don't need to waste class time to take names anymore, and students can't sign in for their classmates. Teachers are also able to understand the status of students' preview of knowledge, mastery of PPT content, answering questions in class and completing homework after class.

With the arrival of the 5G era, smartphones have been completely immersed in campus learning life, and the actual classroom practice has also found that the rain classroom has improved the classroom atmosphere well due to the students' novelty of this teaching method.

2.2. Outcomes-Based Education

The educational concept of output-based education (OBE) first appeared in the practice of teaching reform in the United States, and has been respected because its theory is in line with social expectations (Mufanti, Carter, & England, 2024). Under the traditional classroom teaching model, the teacher is the center and leader of teaching, and the main goal of teaching is to master the content of the subject (Hale, 2024). The OBE concept, on the other hand, aims at the effectiveness of students' learning output and promotes the implementation of classroom activities in the reverse direction. Emphasis on cultivating students' abilities and qualities, so that students become the main body and center of teaching activities, contributing to the change from "content-based" to "student-oriented" education model. So as to cultivate innovative and high-quality talents.

2.3. Participatory Teaching

Participatory teaching research began in China at the end of the 20th century, on the basis of foreign research on participatory teaching, our academia gradually launched related research, which involves multimedia teaching, case study, classroom physical display, simulation teaching, game teaching, classroom discussion, brainstorming, debates, field trips and practical internships, etc. Participatory teaching is not only a kind of teaching, but also a kind of teaching philosophy. Teaching philosophy. Methodologically, it refers to the participation of teachers and students in learning and

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discussion, solving the difficulties encountered, and contributing to teacher-student exchanges and teaching and learning in teaching activities (Cobb & Hoffart, 1999). Conceptually, it advocates a student-centered approach, highlighting the equality and joint participation of teachers and students in the learning process, so that each student with different personality tendencies, different learning backgrounds, different knowledge and experience, and different intellectual characteristics can learn effectively.

3. Characteristics and Teaching Status of Management Courses

Management, formulated by the Ministry of Education, is a core course for business administration majors and an important course in the discipline system. It is also an important course commonly offered in management majors in universities. It is a comprehensive discipline that requires students to master the basic theoretical framework of management science through the analysis of management functions, and to observe, analyze, and think about practical problems from a management perspective. Due to the strong subjectivity, variability, and complexity of actual management activities, the management courses taught by professors have the characteristic of integrating theoretical and practical aspects. The importance of the teaching status of the course "Management" can be seen in its role in reality - management is everywhere and always present in life; The scope of teaching targets is very broad, which makes the research on teaching reform of management courses of great strategic significance. The ultimate purpose of offering this course is to organize and allocate various production factors in a reasonable manner, ultimately improving the level of productivity. In addition, as an important foundational course, this course also lays the necessary foundation for the subsequent teaching of a series of courses such as Strategic Management, Performance Management, and Human Resource Management.

The management courses in our university have been carrying out the process evaluation mode for many years, among which: the examination course is the inter-disciplinary elective course for other majors in our university except management majors, with 30% of the usual grade and 70% of the final grade, and the usual grade is assessed by teachers according to the students' usual performance and completion of homework, etc., and the final examination adopts the form of open-book; the examination course is the basic course of the discipline which is mandatory for the management majors in our university, with 20% of usual grade, 30% of mid-term grade and 50% of final grade. The examination course is a compulsory subject foundation course for management majors in our university, and the usual grade accounts for 20%, the mid-term grade accounts for 30% and the final grade accounts for 50%. Usual grades are assessed by teachers according to students' usual performance and completion of assignments, etc., and the final grade is the final closed-book examination. Although the final grade is no longer determined by a piece of paper, the following problems still exist:

3.1. Vague Teaching Ideas

Before teaching, if teachers do not put forward clear and specific learning objectives, such as using “familiar”, “master”, “understand” and other words to describe the learning objectives, it will make it difficult to quantify the learning effect. It is difficult to quantify the learning effect, and it is difficult for students to grasp the direction of learning. Teaching activities are mostly teacher-centered, ignoring the comprehensive and coordinated development of students' knowledge, quality and ability. In addition, there is less cross-fertilization of the teaching content with other disciplines, and less integration with the development status of the industry and cutting-edge scientific knowledge, which leads to the incomplete mastery of the disciplinary knowledge system, the lack of in-depth understanding of the management disciplines and related industries, and the weak ability of innovation and comprehensive ability.

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3.2. Classroom Teaching Mode Is Single

The traditional teaching mode is to impart knowledge in the classroom, and internalize and absorb the knowledge after class, and the "Management" course is mainly used in the traditional teaching mode, which makes the classroom lack of vitality, low quality of teaching, the teacher is full of knowledge in the classroom, and the students internalize the knowledge outside the classroom by completing the assignments of books, which is a monotonous process, and the students and teachers have little gain. Teachers can not grasp the students' pre-study situation, classroom understanding of knowledge, consolidation and review after class, and at the same time, contrary to the "student-centered" teaching concept, ignoring the differences in the individual learning ability of students, and can not be well in line with the situation of the students. This will further affect the effect of the classroom, weakening the students' ability to link theory to practice, resulting in the mastery of the situation in place. At present, most colleges and universities still use lecture teaching mode, interactive, seminar and other teaching modes have not been teachers as the main teaching mode. The author in one of the class 10 minutes before the next class in the form of issuing small notes for students to anonymously give advice to the classroom, the recovery of the small notes most students expressed the hope that the increase in the form of case studies and video lectures to enrich the content of the classroom.

3.3. Lack of Effective Interaction Between Teaching Subjects

In the case of lecture teaching mode as the dominant mode, teachers and students as the two main subjects of teaching activities, the lack of effective communication between teachers and students in the classroom, the overall level of teacher-student interaction is not high. Especially in the case of limited time, teachers usually take the completion of the teaching task as the main goal, and carry out teaching according to the established ideas, with little interaction with students in the teaching process, resulting in the inability to timely identify and correct problems in the process of teaching, and the teachers' own teaching skills can not be improved. In addition, the theory of management courses are numerous and abstract, but also has a strong practicality, if the pure form of classroom lectures show, not only hard and boring, but also will make many students bored, can not stimulate the interest in learning, the classroom effect is poor. The fast-paced teaching method also makes it impossible to improve students' self-learning ability and critical spirit.

3.4. A Single Mode of Process Evaluation

Although the usual assignments and midterm exams have been included in the scope of the examination of the usual grades, they are still part of the traditional evaluation mode, ignoring many other aspects of the students' performance, such as the performance of the various aspects of the learning process, and failing to comprehensively reflect the students' learning throughout the semester, while focusing on the results of the assessment and neglecting the assessment of the ability to apply knowledge.

Therefore, the current hotspot of innovative research on educational change has shifted to exploring new teaching methods, enriching teaching means and promoting students' independent learning. In recent years, with the development of the Internet and information technology, a variety of teaching modes have emerged, and the way of knowledge acquisition and impartation, and the teaching-learning relationship have undergone fundamental changes. BOPPPS teaching mode, OBE outcome-oriented education concept, flipped classroom, pair-split classroom and other teaching modes have emerged, as well as teaching platforms such as China University MOOC (catechism), Xueyin Online, Aiqi Course, Wisdom Tree and other teaching tools such as Rain Classroom, Superstar Learning Channel, Blue Ink Cloud Classroom, Micro-assisted Teaching and so on, which have greatly improved the efficiency of teachers' teaching and students' learning, and made teachers detailed All these greatly enhance the efficiency of teachers' teaching and students' learning, enable teachers to grasp the learning dynamics of students before, during and after class in detail, and promote students to develop a good sense of self-

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learning and lifelong learning. This paper introduces the OBE concept of rainy classroom combined with participatory teaching mode can well improve the above existing problems.

4. Analysis of Teaching Practices

The teaching reform of management based on the concept of OBE is oriented to the output of students' results, following the principle of "reverse design, forward implementation", and is divided into four steps, including the reconstruction of learning objectives, the integration of course content, the teaching process, and the construction of the evaluation system in terms of implementation. The specific design of the teaching process is shown in Figure 1.

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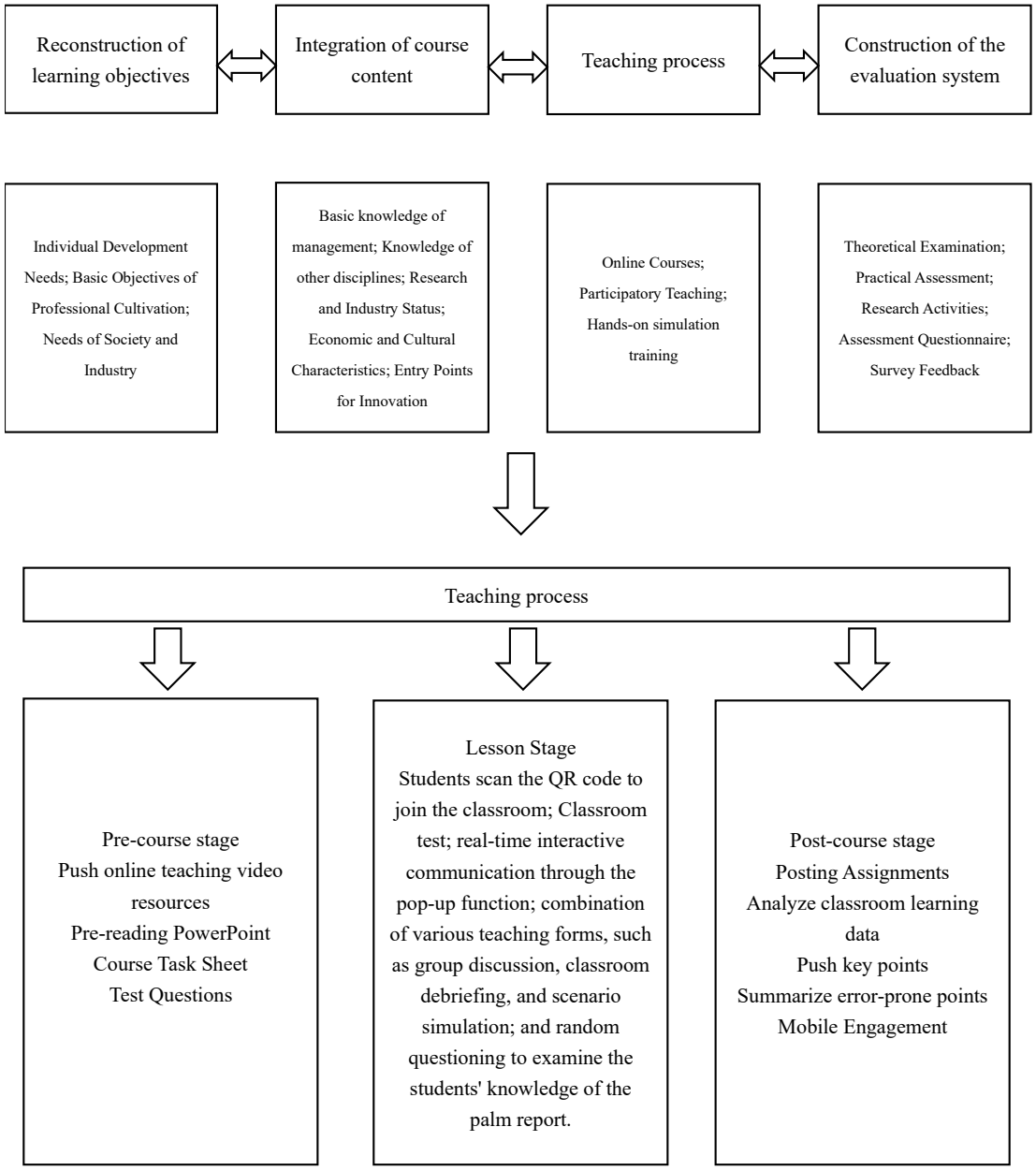

Figure 1.
Teaching process of participatory teaching model.

4.1. Reconstruction of Learning Objectives

In the past, the teaching of management science was driven by the goal of knowledge content, but now, based on the concept of OBE, it has been changed to be driven by the goal of student learning output results. Student learning outputs include the basic goals of professional training, such as having good moral and professional qualities, mastering the basic theories and knowledge of management, cultivating students to use the relevant knowledge of management to guide their own thinking and action, and possessing the professional qualities to continue in-depth study and research. In addition, it

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also includes the goals of students' individual development as well as the needs of enterprise development and regional development, so that students can achieve the coordinated development of knowledge, ability and quality.

Therefore, in the reform of teaching, in view of the shortcomings of the previous teaching, focusing on the students to build a more complete knowledge system, familiar with the knowledge of management, exercise scientific thinking, with a certain degree of innovation and entrepreneurship, as well as independent learning and lifelong learning ability.

4.2. Integration of Course Content

Expanding and integrating the content of the management course with the results of students' learning outputs as the target driver. In response to the needs of local industry development, knowledge of the characteristics of local development is added to theoretical teaching to make up for the shortcomings of the national unified textbook, so that students can familiarize themselves with the local economic development situation, so that they can apply what they have learned and adapt to the requirements of the industry in their workplaces. Regional culture is also inherited and innovated. Increase the breadth and depth of the curriculum, sort out and arrange the content of the Management course, organize the integration points that fit with the cultivation of innovative thinking, and prepare new extended knowledge points to promote the cultivation of students' scientific thinking and innovation ability. Through the redesign of teaching content, the cross-fusion of multiple disciplines, the integration and expansion of knowledge points, the formation of a network from point to point, to help students build a more complete subject knowledge system. This will stimulate students' interest in exploratory learning, broaden their horizons, and cultivate their scientific innovation and ability to solve complex problems.

4.3. Teaching Process

In the OBE concept, the instructor's guiding role should be fully utilized, and the teaching process should be extended from classroom to before and after class, so that students can learn to learn, and change passive learning into active learning.

As a typical representative course in the discipline, management science should walk in the forefront of teaching and become a benchmark of teaching innovation, and the lecturers should follow the trend of the discipline and the development of education, take the initiative to seek for practice and learning opportunities, and actively draw on the advanced teaching experience at home and abroad. Therefore, in the theoretical course teaching of management, through the online course, rain classroom, network platform and other new media technology that students are happy to try, flexible arrangement of teaching activities, online and offline blended teaching is realized, and the learning process such as pre-study before class, reflection after class, and seminar outside the classroom is completed.

4.3.1. Pre-Course Stage

Before the class, students are required to complete the self-study of the online course, online participatory teaching has a wide range of practical significance and social influence, to make up for the traditional and classroom teaching deficiencies, favored by educators, the development of information technology to promote the change of education technology, the Internet has gradually become a new resource and a new place of online education, in this context, contributing to the Mucous Classes, such as a brand new model of online education. Catechism is like "a digital tsunami" in the history of human education, which is sweeping all countries, and is gradually being studied and practiced by higher education workers. Its openness, decentralized and participatory characteristics show the unique advantages of online participatory teaching, and the application of catechism not only has practical value and educational significance, but also is an innovative move of disciplinary breakthroughs.

The cross-temporal online participatory teaching of the "Management" course through the form of catechism and other forms can not only meet the characteristics of the diversity and difference of the

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teaching object, but also enhance the students' professionalism and cultivate the management awareness. In addition to the video teaching, the online discussion is also one of the highlights of the teaching form of catechism and other forms of teaching, and the instructors can initiate the topic discussion in the discussion forum to enhance the students' ability of dispersive thinking. The shared course video and PPT containing inspiring questions, guided learning task sheets, test questions, etc. are pushed to students through the rain classroom tool, and inspiring questions are asked to arouse students' interest in learning through cases, stories, etc. The content of the pre-study generally includes: knowledge review review.

Secondly, the course content is organized by drawing a framework map (or mind map) of the chapter content. In addition, for the chapter content, the teacher can put forward guiding questions, and also encourage students to find problems through independent study. Students can do pre-study and check the pre-study task list through the cell phone, clarify the learning objectives according to the pre-study requirements, and excavate and summarize each knowledge point. In order to help students establish the connection between the previous and previous lessons, and to ensure the effectiveness of students' pre-testing before class, we get feedback information by setting test questions and checking students' test results and other pre-testing data to find out students' weaknesses in learning, so that we can make targeted adjustments to the teaching content, methods, and progress of the offline course. Students can also analyze their own learning deficiencies based on the feedback test results and make targeted adjustments in the classroom.

4.3.2. Lesson Stage

In class, through participatory teaching methods, we discuss with students on key issues. Management should be more and more suitable to carry out a variety of participatory teaching activities to improve the classroom effect, to explore their own unique teaching development path in practice, and to form a characteristic teaching style. Students are involved in the whole process of learning and interactive learning. First of all, teachers need to change the traditional lecture-style teaching to a "combination of lecture and test", that is, to take full advantage of the advantages of the rain classroom can be evaluated in a timely manner feedback, for the content of the course in the end of the lecture to send a time-limited test questions, instant testing of the learning effectiveness, to help students gradually deepen the understanding of the knowledge of the key content. At the same time, students can view the teacher's lecture PPT synchronously on the mobile terminal, and can click on the "don't understand" button on each page of courseware to anonymously mark the knowledge points that they don't understand, so that the teacher can see the number of people who clicked on the "don't understand" button on each page of courseware as well as which page of courseware students still have the "don't understand" button. The teacher can see the number of people who clicked "don't understand" on each page of courseware and which page of courseware the students still don't understand, and then according to the real-time feedback data on the unintelligible content to focus on explaining and adjusting the pace of the lesson, the students can also be targeted according to the "don't understand" mark to repeat the learning and understanding.

Teachers can also apply students' popular online forms to classroom teaching through pop-ups, contributions and other functions, seeing students' anonymously posted insights and opinions at any time, and also generating word clouds of these insights and opinions, which can stimulate students' enthusiasm for learning and real-time interaction with students. In addition, teachers can also use a variety of participatory teaching methods according to the course content, such as group discussions, classroom reporting and other forms, to cultivate students' spirit of exploration of knowledge. First of all, for the introductory chapter of management, teachers can send rain classroom subjective questions in the form of grouping students and organizing students to play the roles of personnel from different departments in the enterprise to simulate the operation of the enterprise, so as to give students a holistic understanding and intuitive experience of management, and to stimulate students' interest in learning.

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Secondly, in the chapter of management thought and management theory, we adopt the form of video teaching, targeting famous historical figures, such as Owen, Taylor, Hawthorne, etc., and playing videos of their biographies and ideological dynamics, so as to enable students to grasp the contributions of the major management pioneers to the theory and practice of management, and to understand the evolution and history of management activities, so as to stimulate students' curiosity and sense of exploration.

Thirdly, the use of case study methods in the chapters of decision-making, organization, leadership and control allows students to understand the advanced methods of actual enterprises and broaden their horizons, and at the same time, through the analysis of the problems found to help students develop a dialectical way of thinking, and promote students' thinking; in addition, in the learning process of various chapters, students are immersed and involved into the learning content, such as the chapter of decision-making plan, which is a micro-video that allows students to Make a college study plan, enhance students' global awareness, and rationally arrange college time, which not only stimulates students' interest in learning, but also helps students to reasonably plan their college life and not to leave regrets for themselves.

In the classroom according to the various knowledge points to design, practice a series of test questions, can also be integrated into the whole course to set subjective questions and the use of rain classroom pushed to the students' cell phones, to examine the overall mastery of the course knowledge and the ability to comprehensively apply the students. In view of the teaching objectives of the teaching of key knowledge points to sort out, in order to examine the students' summary of the course content, you can use the random question function of the rain classroom to let students speak to summarize the learning gains, in order to improve the students' ability to summarize.

In addition, attention is paid to guiding undergraduate students to conduct scientific research activities in teaching. They are guided to raise scientific questions, conduct research on graduation projects, encourage students to participate in "Da Chuang" and other projects, and guide their follow-up research and thesis writing. In this process, students have a deeper understanding of management knowledge and their scientific research ability is greatly improved. As a core course, management science has a guiding role in the teaching of other related disciplines, and it has become an inevitable trend to apply classroom participatory teaching to enrich the form of classroom teaching, enhance the teaching effect, and establish a participatory teaching style with the characteristics of management science.

4.3.3. Post-Course Stage

The importance of classroom teaching is self-evident, however, any method can not cover the learning effect of all students, thus after-class learning, for students' knowledge is a kind of sublimation, after class, with the help of the rain classroom network platform, to set up learning tasks, release the expansion of knowledge, the introduction of scientific research methodology and ideas, the organization of learning and discussion, and guidance for innovative research and so on. At this stage, the assignments will be pushed using Rain Classroom, and the teacher will correct the assignments, collate and analyze the feedback from the students, summarize the key points and easy to error points of this course with the class report pushed by Rain Classroom, and push it to the students' cell phones as the final summary to help them consolidate and review after class.

This course report and feedback information will be used as an important reference basis for the design of the next lesson, making the whole course form a complete teaching chain. Through a variety of teaching methods and means, it shortens the distance with students, increases students' interest in learning, breaks the limitations of traditional classroom time and space, realizes the extension of classroom content, and improves the quality of classroom teaching. At the same time, it strengthens the guiding function of practice and makes the theory connected to practice. Mobile participatory teaching emphasizes personal experience, including field visits and practical internships. Mobile participatory learning is different from classroom participatory teaching, which has obvious characteristics and

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requirements due to the change of teaching location. It requires scientific planning of internship teaching content, the establishment of multi-level internship system such as course internship, summer independent internship and graduation internship to ensure the order and effectiveness of internship.

Our internship has been running for many years, which includes course internships, such as gold digger game and business simulation program, which can comprehensively apply management theories in simulation practice and well disperse students' thinking. At the same time, the school has created school-enterprise cooperation with off-campus enterprises, and regularly organizes internship visits for students. In addition, the school regularly invites entrepreneurs to carry out lectures to enrich students' practical knowledge and improve their practical ability. In a word, the adoption of mobile participatory teaching helps the classroom and practice go hand in hand, puts the internship in the classroom, realizes the multiple combination of going out and inviting in, inside and outside the school, stage and overall, thematic training and comprehensive training, and builds a diversified participatory teaching and practice mode, which can really realize the fusion of the theory of management and the actual practice.

5. Multidimensional Pedagogical Evaluation Based on Learning Outputs

A perfect teaching effect evaluation system is an important guarantee for the quality of practical teaching. The traditional teaching mode is based on the assessment of students' memory and understanding of the teaching content, this assessment is only the evaluation of students' mastery of knowledge, but lack of assessment of students' ability, the content of teaching evaluation will be one-sided. The teaching evaluation of the OBE mode, in addition to the assessment system of the traditional teaching, pays more attention to the realization of the comprehensive ability of the students' knowledge application and other abilities, therefore, in teaching, in addition to the use of quizzes, assessments, exams and other conventional ways of evaluating students' knowledge and skills, it also includes the process evaluation of students in the teaching activities such as thematic discussions, on-line business simulation contests, and business plan design, as well as teacher-student assessment questionnaires, etc., which provide a comprehensive evaluation of the students' learning effects through both direct and indirect evaluations.

From the teaching feedback found that the students' interest in learning, learning autonomy have a considerable degree of improvement; not only, in the theoretical and practical assessment results to achieve better results, Figure 2 for the implementation of the new teaching mode whether the final results of the students compared to the implementation of the new teaching mode, can be found that the implementation of the teaching reform mode student performance compared to the implementation of the teaching reform mode student performance has a significant increase in the number of students in the range of 80-90 points of the students for 36 people. There are 36 students with scores between 80 and 90. Moreover, they actively participate in various scientific research activities. A number of students' projects have been funded by the provincial and university-level "Innovation and Entrepreneurship Competition for College Students", and a number of students have taken the business plan as their graduation project research content. In the research projects, students have trained their scientific thinking and improved their research and innovation ability.

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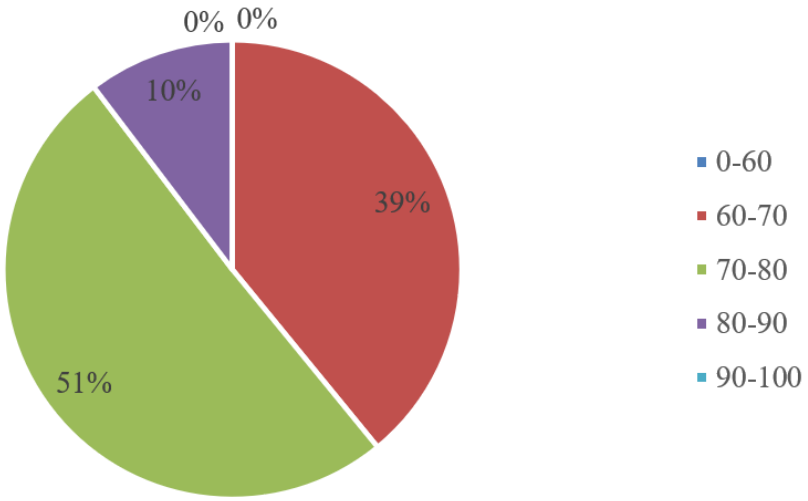

Figure 2.
Student Achievement without pedagogical reforms.

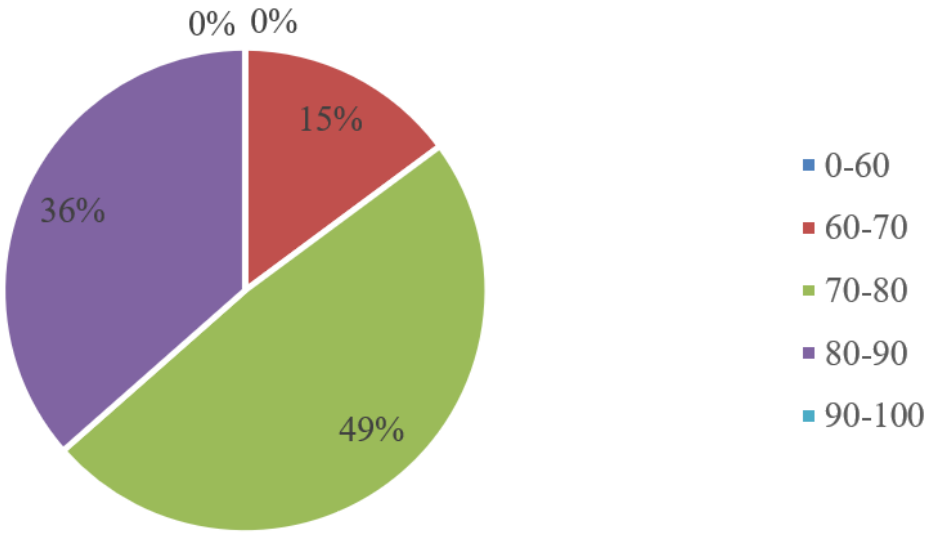

Figure 3.
Student achievement after the implementation of pedagogical reforms.

6. Conclusions and Implications

The teaching of management under the guidance of the OBE concept of rainy classroom combined with participatory teaching mode is centered on students' teaching activities, which can help students improve their knowledge system, enhance their scientific literacy and innovation ability, cultivate management thinking, improve students' professional ability, and adapt to the needs of students' development, industry development, and local economic development, which can significantly increase students' learning motivation and enhance the classroom atmosphere, compared with the traditional teaching mode which is mainly centered on the teacher and accepted by the students passively. Compared with the traditional teaching mode which is mainly teacher-centered and students' passive acceptance, students' enthusiasm for learning is significantly improved and the classroom atmosphere is more active.

The implementation of blended teaching, which combines online interaction with offline face-to-face teaching in the rainy classroom and participatory teaching, breaks through the traditional time and

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space constraints, extends the interaction between teachers and students from the classroom to before and after class, and realizes the closed-loop of "before class - during class - after class". Good circulation. The setting of the discussion class well reflects the students' main position in the whole learning process, and cultivates students' collaboration and communication skills. In addition, the learning model proposed in this paper avoids the problem that teachers cannot control the learning situation of the whole class in traditional teaching, and the classroom quizzes, feedbacks, and after-class exercises can reflect the actual situation of the students, so that the teachers can do "tailor-made teaching" and take individual guidance to meet the personalized learning needs of the students. Most of the students feedback that this teaching mode has stimulated their interest in learning, cultivated their self-learning and mutual communication skills, and that it is a teaching method they like and want to stick to. This teaching mode helps to solve the situation of insufficient teacher-student interaction and low student participation in traditional teaching, and is worth promoting.

In order to carry out pedagogical reform using the rainy classroom combined with participatory teaching mode under the guidance of the OBE concept, a "top-level design" should be carried out first to clarify the objectives of learning outputs. The starting point should be to solve the problems of students' development, and the main problems of our students in adapting to society and their own development should be taken into account to determine the final outcome of talent cultivation, and then the teaching process should be designed using the "reverse design" method.

Although this model has achieved certain results in practice, it needs to be verified by a wider range of teaching practices and more in-depth teaching research. Another challenge of OBE teaching is the development of rational teaching evaluation. As the teaching goal is more concerned with the ability, such as learning ability, innovation ability, etc., which can not be measured simply by memorization exams, it needs a more reasonable teaching evaluation mode, such as the change of the traditional examination method. In conclusion, adopting the OBE concept for teaching reform is a lasting work and puts higher demands on teachers.

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