# Design and Application of Online and Offline Blended Teaching based on BOPPPS

# -- A Case Study of "ERP Sand Table Confrontation Simulation"

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# Abstract

"ERP Sand Table Confrontation Simulation" is a common compulsory course offered by colleges and universities, and it is increasingly taken seriously by various colleges and universities, the course will adopt the BOPPPS teaching mode in the teaching process of course, adopts the teaching way which combines "physical handmade sand table" offline + "business warfare electronic sand table" online, makes students use the online platform to learn theoretical knowledge autonomously, practice independently in combination with "business war electronic sand table" online platform, which stimulates students' interest in learning, enhances students' active participation and enthusiasm, improves students' willingness and ability to learn autonomously, achieves online and offline blended informatization teaching, and improves the teaching level of higher education.

# **Keywords**

ERP Sand Table Confrontation Simulation; BOPPPS Teaching Mode; Online and Offline Blended Teaching.

# 1. Overview of BOPPPS Teaching Mode

The BOPPPS teaching mode is a complete and effective teaching mode, which lays emphasis on students' participation in teaching feedback, including six links: "Bridge-in, Objective, Pre-assessment, Participation Learning, Post-assessment, Summary".

# 2. Current Situation of Course Teaching

At present, "ERP Sand Table Confrontation Simulation" is a common compulsory course offered by colleges and universities, which adopts the traditional offline teaching mode, and it is far dependent on teaching resources and laboratories. The enterprise management theory is used as a baseline for this course, offline "physical manual sand table" as teaching aid, the actual operating environment of a production enterprise is simulated, includes work simulation of strategic management, marketing, financial management, production operation, etc., intuitive and vivid teaching aid is used to build simulated enterprise environment, which makes student enter the scene in the role of enterprise managers, runs the enterprise in dynamic competition, and achieves effective allocation and coordination of enterprise resources.

# 3. Implementation of Course Teaching Reform

## 3.1. Significance of Teaching Reform

#### (1) Realize Differentiated Teaching and Improve Classroom Utilization

At present, the course is teaching offline based on the "physical manual sand table", which involves many links, including operation rules, order selection, operation process, filling statements and many other modules, each team has 5 persons, they are responsible for different simulation positions, due to the limited class hours, each student has different level of acceptance, resulting in different learning progress, which cannot be synchronized, if teachers release the necessary professional theoretical knowledge to the information platform in the form of micro-videos, students can learn anytime, anywhere, carry out independent online exercises in combination with the "business warfare electronic sand table", which can fully improve the learning efficiency of the classroom.

(2) Improve Students' Learning Initiative

Assist the simulation teaching process through the online scenario simulation and website platform, a virtual simulation environment can be created, which can greatly stimulate students' learning enthusiasm in comparison with traditional teaching ways, students experience teamwork spirit, stimulate innovation spirit, enrich teaching means through the practice of simulation process, real situation simulation improves students' planning ability, leadership ability, language organization ability, communication ability and innovation ability. (3) It Is Conducive to the Combination of Theory and Practice of Students

This course simulates the real business operation environment, make students apply theoretical knowledge to practice while learning theoretical knowledge, deepen their understanding of theoretical knowledge in the process of practice, and improve students' theoretical level and practical ability, and has strong social adaptability and innovation ability. (4) Improve Students' Employability and Serve the Social Needs

At present, the society is in urgent need of application-oriented talents who are professional, have strong communication skills, innovation ability, practical ability and all-round ability. The course partly cultivates and improves students' practical ability, cultivates the basic professional skills required by students for their jobs, the talent development more fulfil the requirements of the times, adapts to the needs of work post, and improves the employment rate through course reform.

### 3.2. Objectives of Teaching Reform

(1) Realize Mobile Teaching and Build Online Courses on the "Chaoxing" Platform

Taking this course teaching reform as an opportunity, deepen the course construction, optimize the teaching contents, deepen the teaching quality, improve the teaching resources, expand the construction of the teaching platform and the practice platform, put the theoretical knowledge of the course on the "Chaoxing" platform in the form of micro-video, and it is convenient for students to learn independently.

(2) Implement Flipped Classroom and Realize Online and Offline Blended Teaching

Unlike the traditional teaching ways, the BOPPPS teaching mode is integrated into the course, and participatory feedback teaching is implemented before, during and after class, so as to realize the teaching mode of students' online independent practice and offline simulation confrontation, avoid learning differentiation, after the course ends, students can also strengthen their learning through the "Business War Electronic Sand Table" online platform, give full play to learning efficiency, participate in competitions related to course, build long-term course mechanism, and achieve the learning effect of "learning, thinking, practice, and understanding".

## 3.3. Implementation of Teaching Reform

The teaching reform of this course is based on the teaching way combining "physical manual sand table" + "business warfare electronic sand table" online and offline teaching way, gives full play to the advantages of BOPPPS teaching mode and teaching videos, make students to use the "Chaoxing" online platform to learn theoretical knowledge independently, practice independently in combination with the "Business War Electronic Sand Table" online platform, improve classroom efficiency. The BOPPPS teaching mode is mostly used in theoretical teaching research, but it is rarely used in practical teaching classrooms in colleges and universities. This course reform uses the modern advanced educational concept---BOPPPS teaching mode, with the help of modern information technology platform---"Chaoxing" and "Business War Electronic Sand Table", realize online and offline blended information teaching, and improve the teaching level of higher education.

#### (1) Bridge-in

Because some theoretical knowledge is too abstract, for the problems that are difficult for students to understand and master, the ERP sand table teaching is analyzed in combination with classic cases, the strategy-making methods and implementation effects of different companies in various case are compared, respectively, so that students can compare and analyze the cases, if they have deeper understanding of the teaching knowledge content, they can use it better when making simulation operations themselves.

#### (2) Objective

The course is oriented by the simulation operation of enterprises, and the teaching mode of students' participation in learning, during the teaching process, students can truly combine theoretical and practical knowledge through a series of activities such as teamwork, enterprise strategic planning, budget, and enterprise cognitive process management, cultivates students' strategic thinking ability, analysis and problem-solving ability, stimulates innovation and entrepreneurship awareness in the whole enterprise simulation operation process, enhances innovation and entrepreneurship ability, and learns effective team collaboration and communication, so as to achieve teaching goals.

### (3) Pre-assessment

The online learning platform "Chaoxing" is used, it is dominated by students, distribute course instruction books, "Chaoxing" online teaching video materials in advance, and build online QQ discussion group, make students master and understand the content, teaching form and assessment method of this course before class, students can practice online in combination with the "Business War Electronic Sand Table".

### (4) Participation Learning

The "physical manual sand table" is used to make team simulation confrontation, strengthen the effect of self-learning, teachers guide students offline, students are divided into several groups, according to the set scene, they independently run a business, through role-playing, case analysis, and expert diagnosis, students "learn in participation" and bring together the theoretical knowledge of online self-learning.

When assigning report writing tasks, teachers should put forward different content requirements for each type of role. For example, the finance director should analyze and summarize the data in the report specifically target the financial aspects he is responsible for; the production director is responsible for writing contents related to production scheduling, product research and development investment, etc. In this way, students can participate in the course learning with "tasks" and avoid confusion of roles and tasks.

(5) Post-assessment

Build diversified evaluation system: (1) multi-party participation in the evaluation subject. Change from the traditional one-person teacher assessment to the way combining teacher assessment, student self-assessment, and student mutual assessment, (2) the evaluation content is diversified. The evaluation of students' grade is not only based on the usual attendance and participation, and the writing quality of report, but also takes the business results of competition simulation and the reflection and summary of the course learning as the main basis.

(6) Summary

In the process of teaching reform, on the one hand, it focuses on teachers' teaching, namely comment and incentive strategies; on the other hand, it focuses on students' learning, which is called summary, discussion, and reflection strategies, these two aspects constitute the key teaching chain. Through the co-construction of comments and summaries, students can deeply understand the theoretical knowledge learned, summarize the effect of enterprise operation, help students understand various problems that arise in the application of theory to practice, and deepen students' understanding of management practice deficiencies.

## 4. Teaching Reform Effect of Course

Let students achieve teaching effect of "learning-thinking-practice-comprehension" Through the course teaching reform, apply BOPPPS teaching method to teaching, stimulate students' interest in learning, enhance students' active participation and enthusiasm, and improve students' willingness and ability to learn independently. Learn management knowledge, master management skills, feel the essence of management, experience the spirit of teamwork, comprehensively improve the quality and ability of students' business management, exercise students' ability to apply the knowledge they have learned, and solve practical problems in business management, so that students can apply what they have learned to academic competitions and entrepreneurial practice.

After the course ended, the teaching effect survey was carried out on the overall teaching implementation of the course, according to the results of the questionnaire, 96.43% of the students were interested in this course, 94.64% of the students thought that the course knowledge was very helpful, and more than 80% of the students thought that the assessment method of the course is appropriate, the most impressive course content for 62.5% of the students is the whole process of participating in the simulation operation, 80.36% of the students believed that the course was at an excellent level, and 67.86% of the students said that they were very willing to participate in the ERP sand table related competitions after class, Therefore, the implementation effect of the reform of the academic evaluation way of this course was effective.

### 5. Conclusion

By means of the "teacher teaching, student participation, diversified evaluation, teaching satisfaction", the teaching supply chain system is formed, the traditional mode with "indoctrination" is transformed into "heuristic" teaching, which makes students change from passively receiving knowledge to actively acquiring knowledge, let students experience the complete process of a manufacturing enterprise management, in this way, each student can find the corresponding "professional role" feeling, simulate the workplace, students' innovation and entrepreneurial ability is cultivated, and they have a preliminary position for their career direction in the future.

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