

# Application of Online and Offline Hybrid Teaching in Sand Table Teaching

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**Abstract:** To address the limitations of traditional sand table teaching, this study develops a blended learning model integrating online preparation, offline practice, and online review, grounded in constructivism and connectivism theories. The model clearly defines the roles of online and offline components while establishing a three-dimensional evaluation system covering knowledge, skills, and competencies. However, implementation challenges include significant disparities in students' self-directed learning abilities, unstable online technology, difficulties in organizing offline sessions, and incomplete resource and evaluation systems. To address these issues, optimization strategies are proposed in three key areas: teaching methodologies, resource integration, and evaluation frameworks. This model effectively enhances teaching outcomes, refines instructional design, and optimizes resource utilization. Future business experimental teaching should continuously innovate pedagogical concepts and methods by aligning with contemporary trends and market demands, thereby fostering the development of versatile business professionals.

**Keywords:** Blended online-offline teaching; sand table teaching; evaluation system.

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## 1. Introduction

With the globalization of the economy, enterprises are increasingly demanding versatile and practice-oriented business professionals. As a crucial bridge connecting theoretical knowledge with practical skills, the effectiveness of business experimental teaching directly determines the success of talent cultivation. However, traditional experimental teaching remains teacher-centered, where instructors guide students through step-by-step procedures. Students often leave feeling confused and uncertain about their gains. In conventional experimental teaching, students have limited, disorganized, and poorly targeted self-study resources after class. Moreover, the lack of supervision during the process leads to uneven learning outcomes, which inevitably restricts classroom content expansion, diminishes learning depth, and limits students' opportunities for hands-on practice. These factors significantly impact teaching quality.

The evolution of internet technology has empowered educational reform, giving rise to the blended learning model that combines online resources with offline engagement. This approach integrates the convenience of digital platforms—such as virtual simulation tools, case libraries, and instructional videos—into offline classroom activities. Online platforms enable self-directed learning by transcending time and space constraints, while offline sessions emphasize collaborative group work, hands-on practice, and in-depth discussions. This synergy strengthens teacher-student interaction and skill development, forming a closed-loop system of "knowledge transfer—practice deepening—skill enhancement."

As a core experimental course in business education, the sandbox simulation course cultivates strategic thinking and teamwork through role-playing that replicates full business operations. However, traditional teaching methods face limitations: constrained physical sandbox setups, time-consuming operations, and evaluation systems that focus solely on final outcomes, making it difficult to track students'

decision-making processes. By adopting a blended learning model with a "online preparation → offline practice → online review" framework, this course optimizes teaching effectiveness and provides a replicable model for reforming business experimental education.

## 2. The Development of Online and Offline Hybrid Sand Table Teaching Mode

### (1) Introduction to the Hybrid Sand Table Teaching Mode

The construction of the hybrid teaching mode is supported by the mature educational theories, among which constructivism and connectivism are the core theoretical basis, which provide guidance for the teaching design from the "knowledge construction logic" and "digital learning characteristics" respectively.

The core tenet of constructivism posits that "learning is an active process where learners construct knowledge based on prior experiences," a principle that directly informs the design of teaching scenarios and collaborative mechanisms. In the sandbox simulation course, the online component involves watching videos to comprehend and master relevant concepts, management philosophies, and operational rules, enabling students to activate their existing theoretical knowledge through problem-solving. The offline component features group-based sandbox simulations where students assume roles such as CEOs and CFOs, refining their decision-making logic through the clash of perspectives. Teachers serve as scaffolds—guiding students to organize their decision-making processes through online Q&A sessions and offline feedback, rather than providing direct answers, thereby aligning with constructivism's student-centered philosophy.

Connectivism, emphasizing the "networked knowledge" characteristic of the digital era, posits that learning fundamentally involves "establishing knowledge node connections to facilitate efficient information flow." This theory provides a framework for online resource integration. Courses leverage relevant digital platforms to build resource

networks, consolidating elements like corporate case libraries, industry white papers, and executive interview videos. Students can autonomously link resources based on decision-making needs. Simultaneously, discussion forums on these platforms foster an interactive ecosystem spanning "teacher-student, peer-to-peer, and school-enterprise" interactions. Corporate mentors provide real-time feedback on simulation-based decision-making, while students share data analysis methodologies, collectively cultivating a knowledge co-creation ecosystem. Educators prioritize developing students' "node filtering" skills to prevent information overload.

## (2) The Implementation of Online and Offline Hybrid Teaching Mode in Sand Table Course

The blended sandbox teaching model, combining online and offline elements, transcends a simple combination of "digital + physical" approaches. Centered on educational objectives, it achieves synergistic effects through resource optimization and process redesign. The core principle is: online platforms deliver knowledge transfer and foundational training, freeing up offline time for in-depth practice and interactive engagement. This dual approach ultimately fulfills the dual goals of personalized learning and collaborative skill development.

In the sandbox simulation course, the online module serves as a "knowledge foundation and preparatory training" platform. Before class, instructors upload micro-lectures on "sandbox rules" and "financial statement analysis" along with online quizzes, requiring students to meet minimum scores for offline practical sessions. During sessions, the sandbox platform provides real-time updates like "competitor performance metrics" and "market demand forecasts" to support team decision-making. After class, students submit post-decision analysis reports for online grading and feedback. The offline module focuses on "practical deepening and skill enhancement." In physical sandbox simulations, students work in teams to complete the full decision-making process from "market expansion—product development—capital raising," with instructors providing on-site guidance to address critical issues like "capital chain breaks" and "overcapacity." A "contingency plan" segment simulates emergencies such as "supply chain disruptions" to hone students' crisis response skills. Post-class group presentations analyze online data to identify success and failure factors, creating a closed-loop cycle of "practice—reflection—improvement."

The assignment of teaching tasks follows the principle of "combining difficulty with accessibility": theoretical content such as financial formulas and market analysis methods is completed online; practical content like sand table operations and team decision-making is conducted offline; and complex tasks such as strategic plan design are discussed collaboratively between teachers and students offline.

### (3) Learning Effect Evaluation System

Based on the three-dimensional goal of "knowledge-ability-quality", the evaluation system is constructed, which includes several first-level indicators and several second-level indicators, and takes into account both the process and the result, so as to realize the comprehensive measurement of learning effect.

1. Knowledge mastery dimension: It includes two sub-indicators, "theoretical knowledge" and "application ability". The former examines basic memory, while the latter examines the ability to transform knowledge, avoiding "armchair theorizing".

2. Competency Enhancement Dimension: As the core evaluation module, it comprises three sub-indicators—team collaboration (quality of group task completion + peer evaluation), problem-solving (effectiveness of contingency response plans), and decision-making capability (scientific basis of decisions + outcome benefits). All indicators are comprehensively assessed through a combination of offline performance and online data to ensure thoroughness.

3. The dimension of quality cultivation includes two secondary indicators: innovative thinking and professional quality, which are evaluated through teacher observation and student self-evaluation, focusing on the development of students' non-intellectual factors.

## 3. Open Question

In the process of implementing online and offline hybrid sandbox teaching, some problems and challenges have also been found, which have a certain impact on the teaching effect.

(1) The issue of significant disparities in students' self-directed learning abilities

Students exhibit significant variations in self-directed learning capabilities. While some effectively utilize online resources and actively participate in offline classes, achieving notable progress, others demonstrate weaker self-motivation. These learners often lack initiative and self-discipline, struggle to make effective use of digital tools, and fail to proactively address academic challenges. Consequently, they underperform in blended learning environments with relatively lower grades. Certain students are easily distracted during self-directed tasks, while others lack structured study plans or clear objectives, struggling to manage study time and content selection effectively.

### (2) Problems of Online Teaching Technology

When using online teaching platforms, technical issues like network lag and platform instability may occasionally occur, negatively impacting students' learning experience and progress. These problems not only prevent students from properly watching instructional videos or participating in online discussions, but also undermine their motivation and learning outcomes. During online resource-based teaching, frequent network disruptions often cause some students to miss real-time content delivery, disrupting learning continuity. Additionally, students with under-powered devices that fail to meet platform requirements further limit their educational opportunities.

### (3) The Difficulty of Organizing Offline Teaching

In-person teaching activities, such as sand table simulations and group discussions, require teachers to provide meticulous organization and guidance. However, in practice, the large number of students makes it challenging for teachers to offer comprehensive supervision to every individual, resulting in low participation rates and sub-optimal learning outcomes for some students. During group discussions, certain students lack teamwork spirit and are reluctant to engage actively, which undermines the effectiveness of the discussions. Additionally, the venues and equipment for offline teaching activities are limited, failing to meet the needs of all students.

### (4) The Problems of the Integration of Teaching Resources and the Improvement of Teaching Evaluation System

In terms of teaching resource integration, while both online and offline resources are abundant, the lack of effective coordination between them forces students to expend considerable time and effort in searching for and synthesizing

materials, thereby compromising learning efficiency. The disconnect between online instructional videos and offline teaching cases makes it challenging for students to effectively integrate the two. Regarding the evaluation system, although a multi-dimensional assessment framework has been established, practical implementation still faces issues such as ambiguous criteria and incomplete evaluation methods. The assessment of students' innovative thinking and professional competencies lacks specific quantifiable metrics, resulting in subjective evaluation outcomes. These challenges require further refinement in future teaching practices to enhance instructional quality and effectiveness.

## 4. Policy Optimization and Suggestions

### (1) Targeted Adjustment of Teaching Strategies

According to the differences of students' self-learning ability, the teaching strategies should be adjusted to guide and supervise students' self-learning, and to improve the teaching effectiveness.

For students with strong self-directed learning abilities, more challenging assignments and extended learning resources can be provided. For example, during course studies, companies can be assigned case studies requiring in-depth research and analysis. Students should apply their acquired knowledge to comprehensively analyze business operation issues in these cases and propose innovative solutions. For students with weaker self-directed learning abilities, enhanced guidance and supervision should be implemented. Regular checks on learning progress and homework completion should be conducted, with timely feedback and guidance to help students address learning challenges. Organizing study groups allows students to learn from and supervise each other, fostering a positive learning environment.

In designing teaching activities, greater emphasis should be placed on integrating experimental operations with case analysis. Before conducting sand table simulation exercises, incorporate case analysis sessions where students examine real-world business scenarios. This approach helps students understand corporate decision-making frameworks and adaptive strategies under varying conditions, providing valuable references for simulation exercises. During simulations, instructors should strategically introduce real-world challenges from actual cases, enabling students to apply their acquired knowledge to solve problems and enhance practical skills and problem-solving abilities. Strengthen group discussions and presentation sessions to facilitate knowledge sharing and experience exchange, thereby cultivating communication and teamwork competencies. Students are required to present their group discussions, demonstrating collaborative outcomes and decision-making processes. Teachers should provide constructive feedback and guidance to deepen students' understanding and mastery of the material.

### (2) Integration and Expansion of Teaching Resources

To enrich teaching content and enhance educational quality, it is essential to continuously integrate online and offline teaching resources by establishing a resource-sharing platform. This platform should facilitate students' access to learning materials and improve learning efficiency. By combining online teaching resources such as instructional videos, e-textbooks, and quizzes with offline materials like textbooks, case studies, and practical training reports, a comprehensive teaching resource repository can be created.

The repository should organize resources into categories for easy retrieval and use by students. The platform should also encourage teachers and students to upload and share their learning resources and achievements, including exemplary assignments, project reports, and academic papers, to foster knowledge sharing and exchange. Through this platform, students can learn from peers' best practices and broaden their perspectives. Meanwhile, teachers can monitor students' learning progress and needs, enabling timely adjustments to teaching strategies and content.

To meet students' diverse learning needs, we will diversify teaching resources in both types and quantity. In addition to traditional materials like texts, images, and videos, we will integrate technologies such as virtual reality (VR) and augmented reality (AR) to create immersive learning experiences. By developing virtual business simulation scenarios using VR, students can make operational decisions in digital environments, enhancing their engagement and learning outcomes. We will also expand our collection of industry reports, market research data, and corporate financial statements to provide students with more analytical materials, thereby cultivating their data analysis and decision-making skills. Furthermore, we will gather financial statements from various industries for students to analyze, helping them understand the financial conditions and operational characteristics of enterprises across different sectors.

### (3) Improvement and Innovation of Teaching Evaluation System

The construction of diversified evaluation system is the key to the comprehensive and objective evaluation of students' learning situation, which can consider the students' learning process and learning results, and reflect the students' learning effect and ability level more accurately.

The evaluation framework should prioritize formative assessment. Beyond monitoring students' online engagement, homework completion, and classroom participation, it should also emphasize evaluating their learning attitudes, methodologies, and progress. Teachers should observe students' initiative, proactivity, and focus during the learning process to assess their learning attitudes.

Introducing student self-assessment and peer evaluation methods can fully leverage students' active participation, enhancing the objectivity and comprehensiveness of assessments. Self-assessment enables students to reflect on their learning processes and outcomes, identify strengths and weaknesses, and clarify areas for improvement. Organizing group peer evaluations allows students to assess their teammates' performance in group projects, covering aspects such as teamwork, communication skills, and contributions to the group. Teachers should provide guidance during these self-assessment and peer evaluation processes to ensure accuracy and effectiveness.

Clarifying specific evaluation criteria for each indicator ensures objective and fair assessments. For knowledge mastery, detailed assessment standards should define the content and depth of knowledge students need to acquire. Regarding skill development, tailored evaluation criteria should be established based on different competency characteristics. When assessing teamwork, evaluate communication frequency, collaboration synergy, and task completion efficiency and quality. For problem-solving skills, assess analytical depth, feasibility, and innovation in solutions. In terms of quality cultivation, establish concrete evaluation metrics. When evaluating innovative thinking, focus on

students' original viewpoints and the uniqueness of proposed solutions. For professional ethics, assess students' work ethic, sense of responsibility, and learning attitude. By clarifying evaluation standards, both teachers and students gain clear understanding of assessment criteria, enhancing the practicality and credibility of evaluations.

## 5. Conclusion and Prospects

The implementation of blended online-offline teaching models in sandbox courses will yield transformative educational outcomes across three key dimensions. First, teaching effectiveness will be significantly enhanced. Students' exam performance will steadily improve, demonstrating deeper mastery of business operation theories. Team collaboration, problem-solving, and decision-making skills will be effectively honed through simulated operations, enabling students to apply knowledge more proficiently and make informed decisions. Innovative thinking and professional ethics will be cultivated, with students proposing more creative business strategies while developing stronger career awareness and accountability. Second, teaching design and execution will become more comprehensive. By optimizing instructional objectives and content to align with real-world business needs and market trends, and by innovating offline activities to recreate authentic competitive environments, students' practical experience will be significantly enriched. Systematic restructuring of teaching processes will ensure seamless integration before, during, and after classes, fostering self-directed learning and holistic development. Third, teaching resource integration and expansion will be more efficient. Strengthened industry partnerships will provide abundant real-world case studies and teaching materials, while integrating online and offline resources to establish a shared learning platform. This will streamline access to educational resources and boost learning efficiency. Additionally, continuous diversification of

resource types and the introduction of technologies like virtual reality will enable the development of immersive teaching materials, meeting students' varied learning needs.

Continuous improvement and innovation in teaching are crucial for enhancing teaching quality and cultivating high-caliber business professionals. Future research should closely align with the evolving trends of the times and market demands, continuously exploring new teaching philosophies, methods, and technologies. This will provide more theoretical support and practical experience for the development of business practice teaching, thereby driving the continuous advancement of business education.

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