

Research on the Construction and Practice of Commercial Space Design Curriculum System under the OBE Education Concept

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Abstract:

The teaching idea based on Outcome-Based Education (OBE) is highly consistent with the current training goal of commercial space design talents in colleges and universities. The traditional commercial space design course is lagging behind in curriculum setting, divorced from teaching theory and practice, and single teaching method, which limits the independent and creative development of commercial design talents in the stage of higher education. In order to cope with the ever-changing market demand and development trend in the field of commercial design, this study takes the achievement-oriented “OBE” teaching concept as the breakthrough point, and systematically explores the construction and practice path of commercial space design curriculum system by means of literature review, field research and case analysis. Exploring the reform direction and practical strategy of commercial space design curriculum system aims to provide theoretical basis and practical reference for colleges and universities to build a more scientific and effective commercial space design talent training system.

Keywords:

OBE Educational Concept, Commercial Space Design, Curriculum System Construction

1. Introduction

In recent years, with the rapid development of science and technology, the reconstruction of emerging technologies and business models is triggering profound changes in the traditional business ecology. In this context, the demand for commercial space design talents has gradually changed from the traditional “professional” to the “all-round” with diversified abilities, which puts forward higher requirements for the construction of the curriculum system of commercial space design in colleges and universities. In the actual development of commercial design field, it has become an inevitable trend to cultivate professional commercial space design talents who can meet the market demand and master cutting-edge concepts and new technical capabilities. At present, some commercial space design courses in

colleges and universities have some problems, such as vague course orientation, disjointed teaching theory and practical application, insufficient practicality of course practice, deviation of course content structure from training objectives, weak ability of problem solving and achievement transformation, etc. This systematic defect restricts the training quality of commercial space design talents. Therefore, how to break through the limitations of the traditional curriculum system and cultivate new design talents to meet the needs of the future development of commercial design industry has become an urgent task for the curriculum reform of commercial space design in colleges and universities. The comprehensive quality of business design talents depends not only on classroom teaching, but also on diversified practical activities. Therefore, how to make full use of the existing university resources and build an efficient, low-cost practical education system that meets the needs of industrial development has become the key to the curriculum reform of commercial space design. Based on the concept of Outcome-Based Education (OBE), problems are found from teaching practice, and the teaching design, teaching process, subject setting and evaluation mechanism are optimized, which has important application value for the current curriculum system construction and innovative practice of commercial space design. This method can effectively establish a scientific talent training system and deliver more high-quality professionals for the field of commercial design.

2. Overview of OBE education concept

“Outcome-Based Education” (OBE for short) is translated as “outcome-oriented education” or “output-oriented education” [1], which originated from the United States in the 1980s. Spady, an educator, first elaborated systematically in “Results-based Education: Controversy and Answers”, and Spady defined OBE as “clearly focusing and organizing the education system to ensure that students can gain substantial and successful experiences in their future lives” [2]. It is also pointed out that OBE has achieved a fundamental change in the educational paradigm, with learning achievements as the core elements rather than learning methods or time. The OBE model emphasizes the construction of educational structure and evaluation system by analyzing learning output and adopting reverse design. Its core idea is: teachers and teaching administrators make educational models to achieve training goals by evaluating students’ professional abilities and levels needed in the job market. It is of great significance in global professional mutual recognition and educational reform. OBE concept has been widely recognized and deeply applied. Chinese scholars have introduced the OBE educational concept many times in the reform of curriculum teaching mode, focusing on the theory of “learning achievement” and carrying out diversified curriculum design and practice around the core elements such as educational concept, teaching objectives and training system. In the course design and education implementation, colleges and universities should take “achievement-oriented” as the core concept, pay attention to students’ learning effectiveness, and enhance their professional practice ability in the future. The OBE education concept does not directly stipulate the specific teaching mode, but requires educators to clearly define the ability and level that students should have when they graduate. This “results-oriented” educational concept has strong practical application.

3. Construction of Commercial Space Design Curriculum System under OBE Education Concept

The course of Commercial Space Design is the core required course of environmental design major in Guangzhou Huashang College. With the core concept of Outcome-Based Education (OBE), closely combining with the actual needs of society for talents, we should organize curriculum construction, plan teaching time and design teaching resources around learning output, so as to ensure the high adaptability of teaching content and learning results. Using reverse design method, students-centered teaching strategies are continuously improved to promote the comprehensive reform and optimization of curriculum system, teaching mode and evaluation mechanism.

3.1. Construct the system of curriculum structure and optimize the teaching content

The curriculum system focuses on the core content of commercial space design, covering project planning, spatial pattern and planning, functional organization, spatial interface design, spatial structure characteristics, color design, lighting design, furniture selection, decorative material application, Internet business model, etc. From basic theory to practical application, the course constructs a teaching system for characteristic commercial space project design in a hierarchical and multi-dimensional manner. The teaching content goes from simple to deep, including commercial space design planning, space experience, functional organization, space interface design, service design, human-computer interaction design, project comprehensive creative design and Internet business model. The course design strictly follows the OBE concept, guided by results and problem-solving, and introduces the latest scientific research achievements to maintain the forefront of the course content. By clarifying the requirements for course completion and constructing a curriculum system centered on learning outcomes and meeting internal and external needs. The course of “Commercial Space Design” promotes students’ active learning, participation, deep thinking, and independent exploration through concise, personalized, and interactive theoretical teaching content. The course combines theoretical explanations and practical training projects to enhance students’ technical application and development abilities, help them understand spatial creation elements and their interrelationships, achieve a teaching loop of “demonstration, self-learning, exploration, and coaching”, and effectively integrate course theory with creative practice. The course focuses on cultivating students’ ability to extract spatial design concepts and solve problems, and strengthening their practical skills in transforming abstract concepts into actual commercial space design works. Through systematic teaching and practice, students can acquire substantial experience and abilities necessary for career development, laying the foundation for the development of the business design field.

3.2. Improve the teaching objective system and establish a multi-level teaching approach

According to the development needs of social education, the “Notice of the State Council on Issuing the Implementation Plan for National Vocational Education Reform” proposes to “promote the transformation of a large number of ordinary undergraduate colleges and universities to application-oriented by 2022”. Therefore, building an applied education system that meets the needs of China’s economic and social development and cultivates high-level business design talents has become the key to popularizing higher education. With the rapid development of the commercial

design industry, companies expect to shorten the “retraining” cycle for new employees, and the demand for talents who can quickly adapt to job requirements is increasing. Hence, cultivating business design professionals with professional knowledge, practical skills, and professional ethics has become an urgent task. In the commercial space design curriculum system under the OBE concept, a hierarchical and diversified practical training system is established to provide support for the cultivation of high-level applied talents. Universities should introduce enterprises to participate in the development of teaching plans in accordance with government and industry standards, ensuring the forward-looking and systematic nature of the curriculum. College teachers are responsible for designing the theoretical part of the curriculum, while enterprise teachers focus on developing practical teaching content. The school-enterprise collaborative education model effectively improves the quality and practicality of courses, meeting the dynamic needs of the commercial space design industry. Through project-based and customized teaching methods, as well as problem-solving and collaborative skills development, we aim to comprehensively enhance students' professional understanding, practical application, problem-solving, hands-on operation, and teamwork abilities. This teaching model combines practical activities with learning objectives, strengthening the relevance of career development. Building a scientific and systematic teaching system for commercial space design based on the OBE education philosophy for talent cultivation. It plays an important role in accurately positioning training programs, improving goal achievement, and achieving a closed-loop talent cultivation.

3.3. Deepen school-enterprise cooperation and establish creative practice platform and practice base

In the curriculum system of commercial space design under the concept of Outcome-Based Education (OBE), a creative practice platform and internship base are constructed through school enterprise cooperation. Study the application of future urban new retail models in the field of commercial design. The course covers business space research, culture and art, space interface design, Internet plus fashion business model, new media promotion, official account promotion, store display design, etc., forming a systematic teaching system. A team composed of university teachers and business experts to achieve the integration of theory and practice. The school supports teachers to participate in enterprise research, learning exchanges, and on-the-job practice to enhance their practical abilities. At the same time, we will absorb industry experts, integrate frontline practical experience into teaching, and provide precise and socially relevant practical guidance. Regularly invite corporate executives, renowned professors, external mentors, and senior designers to hold special lectures and seminars to broaden students' horizons. Through multiple rounds of project-based practice, under the joint guidance of on campus and corporate mentors, an innovation team is formed, and the division of labor among members is clarified. With the help of the campus entrepreneurship incubation base platform, commercial space project design and entrepreneurial brand incubation activities are carried out, deeply integrating design enterprises, research institutions, and higher education institutions to provide students with a platform for independent learning. The “dual mentor” model deepens practical innovation in teaching reform and strengthens students' innovation ability. By establishing research centers for sustainable development in urban and rural areas, school enterprise cooperation bases, and joint training models, university teachers and enterprise teachers jointly lead. Enhance students' practical

abilities while meeting their professional theoretical knowledge needs, and promote the cultivation of applied talents.

3.4. Based on results, formulate a multi-dimensional evaluation and assessment system

In the Outcome-Based Education (OBE) model, learning output assessment is a key link, mainly covering curriculum teaching assessment and achievement evaluation. The feedback of evaluation results serves as the basis for continuous improvement of teaching [5]. Practical teaching assessment and evaluation are results oriented, focusing on recording the learning process, using joint evaluation by enterprise designers and full-time teachers, and introducing project group mutual evaluation and course parallel class cross evaluation to build a sound evaluation system. This system emphasizes process based learning, reflecting personalization and fairness through phased teaching evaluation, valuing student self-evaluation, participation of enterprise designers, and mutual evaluation among team members, especially focusing on formative evaluation, to stimulate students' enthusiasm and professional spirit.

The construction of the commercial space design curriculum system under the OBE education concept needs to incorporate innovative ideas and effectively combine measures with teaching and training processes. Curriculum design and teaching focus on practical exploration and innovation, reflecting timeliness and creativity. From top-level professional design to curriculum outline development, and then to teaching process implementation, ability evaluation reports are automatically generated based on students' learning situations. Teachers support talent development goals and promote teaching reform by analyzing evaluation results. Through the above methods, the teaching problems in commercial space design courses can be effectively solved, significantly improving students' learning outcomes and practical application abilities.

4. The Construction and Practice of Commercial Space Design Curriculum System under OBE Education Concept

Under the Outcome-Based Education (OBE) model, the teaching process is student-centered and learning outcomes oriented, improving teaching efficiency and quality. This mainly reflects the design of teaching content (what to teach), the implementation of teaching process (how to teach), and teaching evaluation feedback (how well taught). Through the "student-centered" classroom teaching reform, the design of teaching content needs to be closely focused on students' expectations.

4.1. The Theoretical basis and system construction of commercial space design course under OBE education concept

In the teaching practice of commercial space design course based on OBE education concept, the number of elective students in recent five years has reached 768. The course is student-centered and guided by the output of learning results, which can effectively improve the teaching efficiency and quality, solve the problems such as the disconnection between teaching theory and practice, and the lack of students' ability to solve problems and transform results. Through the implementation of the course, students' design ability and judgment have been significantly improved to meet the needs of career development. The course is guided by the sustainable development center of urban and rural areas, and the practice base of teacher team and school-enterprise cooperation is constructed. Cultivate students' practical innovation

ability from the level of basic learning achievement output and internship practice, and enhance students' participation and achievement transformation ability.

In the process of teaching implementation, the flexible mode of "the combination of team centralized guidance and teachers' personal guidance" is adopted. Through the combination of centralized teaching and divided teaching, the atmosphere of classroom communication and discussion is enhanced, and the teaching restrictions of one class corresponding to one teacher and between classes in traditional teaching are broken through, so as to stimulate students' creative design thinking and guide brainstorming learning. The specific teaching implementation plan of the teachers' team is as follows: In the initial stage of the course, five classes are used for centralized teaching, with the main teacher explaining the course and designing the winning scheme of the competition, and the remaining four teachers providing auxiliary guidance. In the middle stage of the course, it is carried out in the form of group report, which requires the design scheme to complete 50% of the progress, and each class selects 1-2 groups of excellent works to report. In the final stage of the course, the form of group report is also adopted, and the design scheme is required to complete 100% progress, and 1-2 groups of excellent works are selected for report in each class to ensure the quality of the results of the commercial space design course. Teachers' team members focus on different teaching contents, work together, complement teaching experience, and promote new and old teachers to learn from their methods and improve teaching quality. The course arrangement is flexible and interactive, and students get guidance from many teachers, and get diversified information and suggestions. Many teachers participate in the active classroom atmosphere, reduce teaching fatigue, strengthen the learning atmosphere of the course, and increase the opportunities for students to discuss in class (Figure 1).

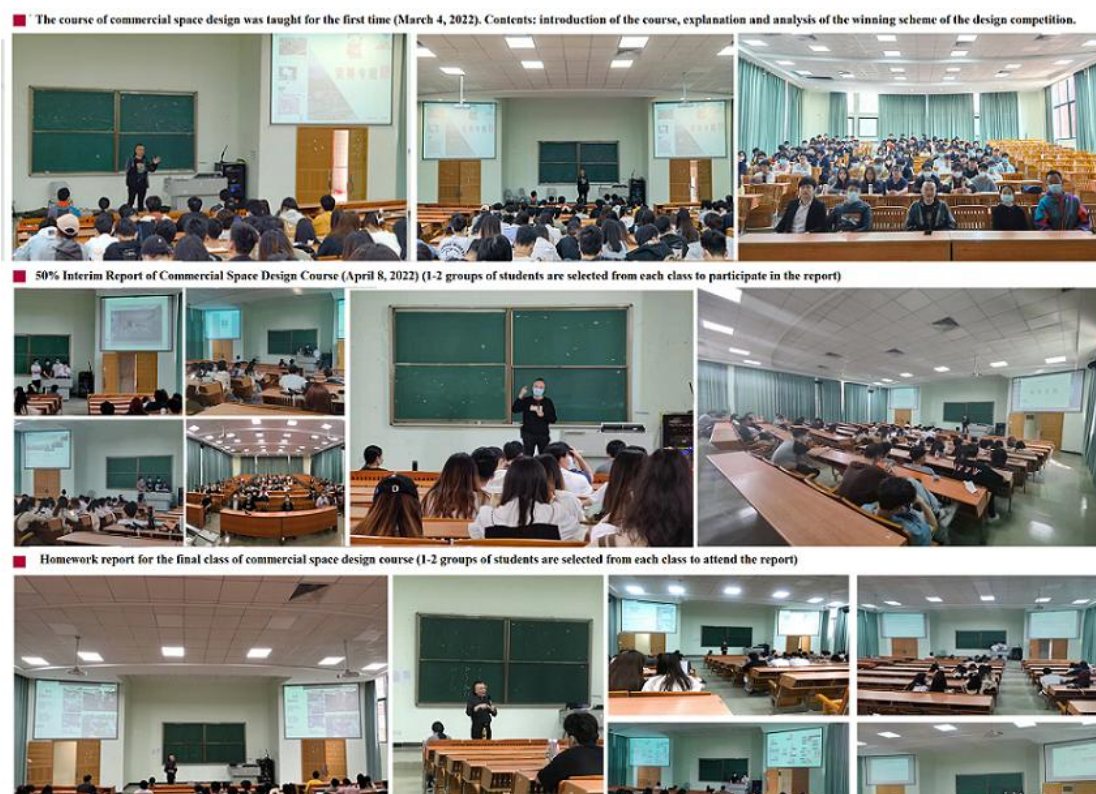


Figure 1. Teaching Practice of Commercial Space Design Course.

4.2. Practice and achievement evaluation of commercial space design curriculum system

This research takes Huang Qibin, a 2023 student design team under the guidance of Professor Li Taishan's teacher team, as a typical case (Figure 2) for academic analysis. The research is divided into basic research and practical innovation.

(1) In the basic research and practical innovation, the design team establishes the core design concept of the "new retail ecosystem model" through systematic commercial space research, and constructs innovative frameworks such as user interface design, ecological interaction system, industry chain integration, and new media communication path. Based on the course of interior design principles, combined with questionnaire surveys and market research, this study accurately targets the "post-90s" and "post-00s" youth groups as target users. The teaching team adopts a progressive teaching method of "demonstration analysis practice guidance", and systematically constructs a cognitive system and technical path for commercial space design through modules such as on-site investigation of commercial spaces, analysis of typical cases, and cultivation of problem awareness. The research team innovatively proposed a renovation strategy guided by the "Place Memory Theory" in existing building research, using the adaptive reuse theory framework to establish the three in one renovation principle of "preserving historical texture+restoring spatial context+reconstructing functional formats". The design strategy focuses on addressing three core issues: firstly, the restructuring and integration of functional spaces with new and old formats. The second is to parameterize the design and construction of capsule guest rooms and private single room systems to address privacy and security issues. The third is to introduce vertical greening and modular installation art to create a composite spatial interface with ecological regulation functions. At the technical level, the design team establishes a technical support system for material performance databases, spatial scale parameter models, and color psychology application systems. In terms of spatial interface treatment, innovative use of composite construction technology of transparent concrete and recycled wood continues the historical texture of industrial architecture and integrates contemporary aesthetic elements. The final design scheme aims to optimize spatial efficiency, preserve the original truss structure, reconstruct a multi meaning public space that conforms to the behavioral characteristics of the youth community, and shape a contemporary youth social field that carries the memory of the city.

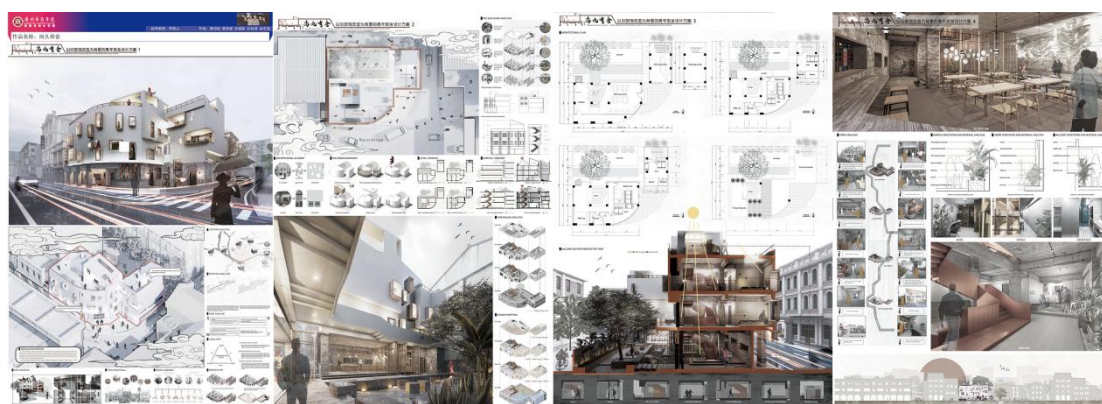


Figure 2. Student Huang Qibin's design team "Long-term Shelter-Guangzhou Youth Hostel Reconstruction Project".

Source: the figure is from Student Huang Qibin

According to the results of the works at this stage, students have initially possessed the ability of systematic integration of commercial space design elements, and their ability of spatial form refining has been significantly improved. The concrete manifestations are as follows: first, the ability to analyze functional requirements, translate modeling language and systematically express material properties is constructed. The second is to cultivate the ability of problem-oriented solution construction, master the multi-dimensional integration law of material media and space field through independent exploration, and show advanced aesthetic judgment especially in the integration and innovation of new environmental protection materials and historical building texture. Teaching practice shows that the phased training program can effectively stimulate students' academic exploration and innovative practice kinetic energy, and its teaching effect achieves the expected training results.

(2) Deepening the project stage: The main focus is on expanding creative thinking and fashion oriented design in commercial design, which is collaboratively completed by the "Shang Jiu You She" design team. In this stage, students are guided to conduct in-depth analysis of excellent commercial space design cases based on previous research, and systematically integrate design inspiration sources, color matching, spatial interface processing, and computer image output through brainstorming to cultivate creative design thinking. Students need to train in the combination of commercial space design and multiple elements such as functionality, materials, form, space, color, etc., to strengthen the complementarity and coordination between each element, and master design software such as AutoCAD, SketchUp, and Enscape to carry out commercial space planning, model making, construction drawing, high-quality rendering, material and lighting processing, and post production rendering. In addition, students also need to have the ability to arrange the layout and make a complete copy to ensure that the design works are both high-quality and creative. Through this stage of study, students can effectively solve key problems such as commercial space and functional planning, material use and shape control, and the relationship between color matching and spatial environment. Show the specialization and systematization of design thinking, as well as the precise control of details and deep understanding of the overall effect in the design process. The results of this project highlight the students' comprehensive application ability in the interface design of commercial space, such as the expression of material characteristics, shape control, color application and the relationship between space environment, and deeply understand the relationship between color application and space environment. It reflects the remarkable improvement of his creative thinking in professionalism and systematicness, and shows his deep understanding of multi-factor coordination and integration in design practice.

(3) Comprehensive project creation stage: In the comprehensive project stage, teaching design is closely integrated with the research of commercial space design works. Students analyze excellent cases, sort out their creative methods and technical means, and integrate innovative exploration based on reference. By adjusting the interface design of commercial spaces, replacing new materials, restructuring spatial structures, and refining colors, novel artistic effects can ultimately be achieved. This stage of teaching focuses on cultivating students' logical thinking ability to extract design concepts and solve practical problems, and strengthening their ability to transform abstract concepts into concrete commercial space works. The teaching objectives follow the principle of phased approach from shallow to deep, practicing the teaching method of "self-learning, exploration, feedback, and coaching". Through

team teaching, the resources inside and outside the school are integrated with tutor resources, combined with practice and theory, the course invites front-line designers of design enterprises to participate in the evaluation, organizes mutual evaluation of project team students and comprehensive evaluation of teachers, selects outstanding works, and promotes students' innovative and entrepreneurial ability through subject competitions and practical activities (such as live broadcast platform and WeChat official account exhibition) to provide students with opportunities for exhibition and exchange. In this process, the team of "Shang Jiu You She" started from scratch and gradually matured, and deeply grasped the principles and processes of commercial space design. Students are not only familiar with the logical thinking method of refining design concepts and solving problems, but also transform concepts into the operational ability of commercial space works through practice. At the same time, it completed the transformation of course achievements and won the award of the 10th National Digital Art Design Competition for Colleges and Universities. The realization of the overall teaching goal fully reflects the hierarchy and systematicness of phased teaching, and at the same time effectively implements the teaching concept of "self-study, exploration, feedback and counseling".

In summary, the practical achievements of project creation in the above three stages reflect the teaching concept of achievement-oriented and problem-driven. The basic project focuses on experimental and enlightening creation, and the difficulty of creation in the deepening project stage gradually increases and tends to standardization, while students are encouraged to create freely in the comprehensive project stage. This process not only successfully realizes the gradual upgrading of teaching objectives, but also effectively practices the teaching method of "demonstration, self-study, exploration and counseling".

5. Conclusions

This study is based on the Outcome-Based Education (OBE) concept, and systematically constructs and practices a curriculum system for commercial space design. The OBE concept clarifies the three-stage teaching objectives of "foundation deepening comprehensive", achieving hierarchical design of teaching content and progressive improvement of ability cultivation, providing solid theoretical support for the scientific construction of the curriculum system. The course adopts a closed-loop teaching mode of "demonstration, self-learning, exploration, and tutoring", effectively enhancing students' learning initiative and practical ability, while strengthening their design thinking and innovation ability. In addition, the course integrates interdisciplinary knowledge such as art, design, and technology, fully reflecting the cutting-edge characteristics of interdisciplinary studies, and enhancing the innovation and timeliness of the course. The phased project design provides strong support for the systematic achievement of teaching objectives, helping students transition from basic skills to comprehensive ability improvement and free creation, and optimizing teaching effectiveness. The practical results have shown that students have mastered the core elements and methods of commercial space design, enhanced their creative thinking and teamwork abilities, and laid the foundation for cultivating composite innovative talents that meet social needs. This study provides practical cases for curriculum reform in the field of design, and also offers new ideas and references for improving the quality of higher education and optimizing talent cultivation models.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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