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Research on the New Business Project-Based Talent Training Model Driven by Design Thinking

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Abstract: Under the background of new technologies and new political and economic development, the training of business talents faces a major bottleneck in development. Based on the characteristics of the application of business talent training, design thinking with its flexible and iterative innovation characteristics and project-based teaching model with its unique pragmatic concept and ideas of "learning by doing" match it. Therefore, it is feasible to improve the level of business talent training through the project-based teaching model driven by design thinking. This paper discusses how to carry out project-based teaching driven by design thinking from the aspects of curriculum design, teaching process, and teaching evaluation, and conducts practical exploration and testing, in order to make certain contributions to the exploration of the path of training new business talents.

Keywords: Design Thinking; New Business; Project-based Teaching.

1. Introduction

As the core talents in the main battlefield of economic development, the training effect and quality of business talents still have a certain gap with the needs of social and economic development. Under the background of the rise of emerging technologies such as big data, artificial intelligence, and the Internet of Things and the increasing uncertainty of global political and economic development, the training of business talents faces a major bottleneck in development. Design thinking emphasizes a user-centered approach, focusing on problem solving, innovation, and prototyping, and has gradually become a method to lead innovation in business teaching. At the same time, the project-based teaching model matches the application characteristics of business talent training with its unique pragmatic concept and ideas of "learning by doing". Therefore, how to drive the new business project-based talent training with design thinking and thus improve the level of business talent training has become an important topic worthy of study.

2. Current Situation and Bottlenecks of Business Talent Training

(I) Current situation of business talent training

Since the Wharton School of the University of Pennsylvania started university business education, business talent training has gone through more than 100 years of development. Since the beginning of the 21st century, business talent training has entered a new climax. With the basic completion of the popularization of higher education in China, domestic business talent training has achieved remarkable achievements. The next step will be to move from popularization to high quality. The vigorous development of technologies such as big data, artificial intelligence, and the Internet of Things, and the intensification of global political and economic turmoil, have also put forward new and higher requirements for business talent training, thus exposing the bottleneck of business talent training.

(II) Bottlenecks in business talent training

Under the new situation, the bottleneck of business talent training has become more prominent. First, there is a lack of connection and integration between business-related disciplines, and an integrated knowledge system and ability training system have not been formed; second, the business teaching model is teacher-oriented, and students' learning enthusiasm has not been fully mobilized; third, some business courses are out of touch with theory and practice, lack practical verification and iteration, knowledge and practice have not been unified, and theories have not been updated in a timely manner. Finally, these factors have caused some business students to learn something after graduation, and at the same time, many companies are unable to find suitable business talents, forming a structural contradiction between supply and demand of talents.

(III) Exploration of business talent training

Both at home and abroad have actively explored and made beneficial attempts to cultivate business talents, and have accumulated a lot of experience and models that can be used for reference. Ma Tingqi and Mao Liwei (2023) mentioned that at Olin Institute of Technology, all course teaching designs must be based on projects, requiring students to conduct inquiry-based learning around course projects, and projects run through the entire learning process of students. Li Jiali (2019) mentioned that the reason for the successful implementation of entrepreneurship education in Baisen Business School lies in its entrepreneurial thinking and action (ET&A) education concept of unity of knowledge and action and the curriculum ecological system of curriculum-extracurricular activities-academic research. Among them, the education concept of unity of knowledge and action contained in ET&A is particularly worth learning from; Cai Guoliang and Chen Ping (2020) summarized and analyzed practical project-based teaching based on the teaching practice of multiple business disciplines. It is proposed that practical project-based teaching can effectively avoid the problems in the current education form, platform, faculty, content attractiveness, etc. in dual entrepreneurship education, and it is worth promoting vigorously. Guo Wei and Song Li (2022) proposed to build a teaching project platform based on the concept of project-based teaching, aiming to aggregate high-quality projects of different types, different difficulties, and different directions that are closely related to industrial development needs, and provide students with different

learning needs with a teaching platform for practice, communication, and innovation to improve teaching effectiveness. Li Kaiyue (2023) believes that project-based teaching is conducive to cultivating students' autonomous learning ability, interdisciplinary knowledge integration ability and team communication ability, helping students to further adapt to the changes brought about by digital intelligence empowerment in the "Industry 4.0" era, and at the same time helping students to solve practical problems efficiently. Shang Yanying, Jiang Junfeng, and Yu Liqi (2023) pointed out that design thinking includes a series of tools, methods or work guidelines to solve the uncertainty problems faced by corporate innovation under limited rationality. In short, design thinking, with its innovative, flexible and inclusive characteristics, is highly consistent with the characteristics of the era of uncertainty brought about by technological change, political and economic turmoil.

Therefore, the iterative innovation characteristics of design thinking are integrated with the integration and practicality of the project-based teaching model, becoming one of the important paths to improve the talent training model of business.

3. Design Thinking and Project-Based Teaching

(I) Concept and characteristics of design thinking

Design thinking is a creative, problem-solving oriented thinking method, which is usually applied in product design, service improvement, process optimization and innovation. Its core concepts include the following: user-centered, interdisciplinary collaboration, rapid prototyping, feedback loop and active thinking. Design thinking advocates starting from people's needs and emphasizes in-depth understanding of the problems behind them, rather than just the surface phenomena. This approach focuses on continuous iteration in multiple stages to improve and optimize solutions. Design thinking also emphasizes innovation, creativity and open thinking, and encourages challenging traditional thinking patterns and finding non-traditional solutions. The introduction of design thinking in the field of business education has received widespread attention. Studies have shown that introducing design thinking principles into the classroom can improve students' creativity, problem-solving ability and practical application skills.

(II) Concept and characteristics of project-based teaching model

The project-based teaching model originated from the educational concept of "Learn by Doing" by Dewey, an American pragmatist philosopher and educator, and Cooper's experiential learning theory. Its main idea is to arouse students' interest in solving problems through problems in actual social situations, thereby guiding students to learn and explore new knowledge in the form of projects.

Compared with the traditional model, the project-based teaching model has three characteristics. First, the project-based teaching model needs to integrate the knowledge of various disciplines, and requires students to actively learn multidisciplinary knowledge and integrate them in order to better solve project problems. Second, the project-based teaching model has transformed the traditional teacher-centered model into a student-centered model, where teachers become coaches or guides, fully mobilizing students' learning autonomy and enthusiasm. Third, the project-based teaching model promotes the integration of theory and practice. Teachers hand over projects to students, who organize their own teams to face real problems, collaborate in teams through research, analysis, design, modeling, verification and iteration, think deeply, communicate and collide, and practice deeply, forming products or services that initially solve real social problems and meet real social needs, thus achieving a deep integration of theory and reality.

(III) The fit between the project-based teaching model driven by design thinking and the requirements for business talent training

Business talents face the main battlefield of the economy, need to face a complex and changing business environment, need to integrate different knowledge and resources, face various opportunities and challenges independently, and solve business problems through practice. Design thinking is user-centered, constantly iterating and innovating, and the three characteristics of the project-based teaching model, namely, the integration of subject knowledge, the student-centered teaching model, and the integration of theory and practice, are highly consistent with the requirements for innovation, comprehensiveness, autonomy and practicality required for business talent training.

4. Application of Project-Based Teaching Model Driven by Design Thinking in the Training of New Business Talents

(I) Design of interdisciplinary course groups with project orientation

The project-based teaching model driven by design thinking must be considered from the top-level design in order to be implemented in the training of business talents. In the training program of business talents, it is necessary to break through the traditional course design model based on subjects, and design courses based on the different abilities required to complete the project, such as teamwork ability, communication and negotiation ability, logical thinking ability, design and modeling ability, innovation and entrepreneurship ability, etc., and ensure the connection and integration of different modules to support the formation of an integrated talent training model. The Hong Kong University of Science and Technology, which is famous for its innovative and entrepreneurial education, breaks down the barriers between disciplines and integrates disciplines, research and practice through four major hubs: functional hub, information hub, system hub and social hub, which is a high interpretation of this idea.

(II) Drive project-based teaching with the real needs of society

Guided by the real scenes, real problems and real needs of society, guide students to go deep into society and enterprises, find problems at the front line, find opportunities for innovation and entrepreneurship, integrate knowledge of various disciplines and resources from all aspects in the form of projects, and improve or create products, services and solutions through continuous exploration, trial and error, iteration and innovation. Olin Institute of Technology takes real social needs as the prototype, guides students to learn knowledge of various disciplines by doing through project-based teaching, integrates resources from different aspects such as schools and enterprises, and completes product design and production in practice through the guidance of design

thinking, thus achieving the goal of cultivating practical talents.

(III) Test the results of project-based teaching with the results of innovative entrepreneurial practice

The training results of the traditional business teaching model end with the successful graduation of students. The employment rate is greatly affected by the employment environment and personal opportunities, and is often paid attention to after the fact, with a certain degree of randomness and lag. The project-based teaching model driven by design thinking puts students' employment ability and innovation and entrepreneurship ability in the forefront. On the one hand, the project-based approach deeply cultivates students' comprehensive abilities, thereby improving their employment ability and innovation and entrepreneurship ability; on the other hand, the project-based teaching method forms project results, project experience and project connections. Some results can be directly transformed into products for entrepreneurial practice, and some create value for enterprises through projects. Students' abilities are recognized by enterprises, and students and enterprises maintain two-way communication and trust. Employment is a natural outcome.

(IV) Practical exploration based on the course "Business Model Design"

Shang Yanying, Jiang Junfeng, and Yu Liqi (2023) pointed out through empirical research that design thinking and business model innovation show a significant positive correlation, trial and error significantly positively affects BMI (business model innovation) novelty, evaluation significantly positively affects BMI efficiency, and iteration significantly positively affects BMI novelty and BMI efficiency. Therefore, business model design guided by design thinking can significantly improve the innovation and efficiency of business model design. Therefore, guiding business model design courses with design thinking may improve the effectiveness of the course.

In the course "Business Model Design" I taught, I conducted a preliminary exploration of the project-based teaching model driven by design thinking, achieved good results, summarized the preliminary experience, and conducted a preliminary verification of the effect of design thinking in guiding business model design.

First, choose courses with strong practicality for experimentation. "Business Model Design Course" is a compulsory course for business administration majors, which mainly introduces the basic concepts, theories and design methods of business models to improve the success probability of students' innovation and entrepreneurship. The course is highly practical and comprehensive, and is very suitable for project-based teaching.

Second, guide the business model design process with design thinking. The application of design thinking has a significant impact on the innovation and improvement of business model design courses because it emphasizes practical problem solving, creative thinking and user-centered methods. Design thinking encourages teachers to start from the students' perspective and deeply understand their needs and expectations, which helps to personalize teaching and improve student participation; Design thinking emphasizes solving real problems, not just imparting theoretical knowledge. Students develop the ability to solve real problems through actual business model design projects and case studies; Design thinking encourages students to challenge traditional thinking and propose new innovative solutions, which helps to cultivate students' creative thinking and promote business model innovation; Design thinking advocates multidisciplinary cooperation, which helps students understand business model design issues more comprehensively; Design thinking emphasizes iteration and rapid prototyping, which allows students to concretize business models into specific product prototypes and obtain user feedback in a timely manner, thereby continuously iterating and optimizing business models; Design thinking emphasizes social and sustainability issues, helping students to cultivate a sense of social responsibility. Business model design courses can cultivate students' sense of social responsibility and sustainable development concepts through design thinking.

Third, in the course assessment link, a new assessment method is adopted. Different from the original lecture system, the students' learning outcomes are tested through examinations, which are limited to the examination of knowledge mastery. The assessment of the project-based teaching model driven by design thinking is conducted by students in groups through roadshow business plans, and teachers and external experts jointly comment on the scene to timely test and feedback students' learning outcomes. The assessment makes a more objective and comprehensive evaluation of the comprehensive quality of student teams and individuals from multiple dimensions such as the comprehensiveness, feasibility, innovation, teamwork and on-site performance of the business plan.

The above teaching practice preliminarily proves that design thinking can guide business model design teaching to improve students' learning enthusiasm and creativity, and the innovation and efficiency of business model design have also been improved simultaneously. However, due to certain limitations in the number and level of students participating in the course teaching, the verification effect still needs more samples to be further confirmed.

5. Summary

In short, under the new era background, the business talent training model has encountered a bottleneck and must undergo major changes. The project-based teaching model driven by design thinking is highly consistent with the requirements of new business talent training with its flexibility, iteration, innovation, discipline integration, student-centeredness, and practical integration. Through the design of interdisciplinary course groups, driven by real social needs, and the inspection of innovative entrepreneurial results, from top-level design, implementation path to effect evaluation, a complete closed loop of new business project-based talent training model driven by design thinking is formed. Through gradual exploration and iteration in practice, the level of new business talent training is continuously promoted.

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