Research on the Teaching Reform of "Inter- Professional Comprehensive Training" Based on the BOPPPS Model under the Background of New Business

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Abstract

With the development of new technologies such as the Internet, cloud computing, artificial intelligence, and big data, new business models and new industrial forms have emerged. The demand for talents is also rapidly increasing across industries. This also puts forward new requirements for the cultivation of business talents and the reform of business teaching mode. "Inter-professional comprehensive training" is a highly applied course. By simulating real job content, business process, business documents, etc., students' job skills, professional quality, business decision-making ability and innovation ability are cultivated. This paper analyzes the development of inter-professional comprehensive training in Z school, analyzes its existing problems, and proposes, among other things, targeted teaching reform suggestions, so as to provide reference for schools that carry out relevant courses.

Keywords: New business, BOPPPS, teaching reform, training, Z school

1. Introduction

The State Council's "Guiding Opinions on Actively Promoting the "Internet Plus" Action Plan" mentioned the need to flexibly use the Internet to explore new educational services (Chen et al., 2018; Huang & Lan, 2020). This reform encourages schools to use digital educational resources and educational service platforms to gradually explore different models of online education. The China State Council also encourages schools to take advantage of the Internet, integrate online and offline teaching, reform traditional teaching concepts, enrich

students' brains, and expand students' horizons, thereby promoting the development of modern education in China (Zhao, 2010; Shen, 2018). In other national development plans, it has also repeatedly emphasized that information technology has a revolutionary impact on educational progress, which must be highly valued (Altbach et al., 2019). This puts forward new requirements for the specifications of talents training and teaching mode reform in colleges and universities.

With the development of new technologies such as the Internet, cloud computing, artificial intelligence, and big data, new business models and new industrial forms have emerged (Li et al., 2017). The demand is also getting stronger. This also puts forward new requirements for the cultivation of business talents and the reform of business teaching mode. Although there is no consensus on the concept and connotation of "new business", and different scholars have different views, there are still some common points among them. New business uses the advantages of the Internet and information technology to integrate online and offline teaching (Taylor & Todd, 1995; Liu et al., 2020). This may help realize the integration of different disciplines and different majors, and achieve the goals of improving students' learning ability, thinking ability, practical ability and innovation ability.

"Inter-professional comprehensive training" is a highly applied course. The course moves the "enterprise" to the campus and builds a virtual business social environment that integrates the market environment, business environment, government affairs environment and public service environment (Kwan & Lee, 2018). The Virtual Business Society Environment (VBSE) platform simulates the real job content, business process, and business documents. Students use the VBSE platform to perform job division, role-playing, and business operations (Rossini & dos Santos, 2015; Geng, 2019). This will let students experience the division of labor, collaboration and development between organizations on campus. This course can meet the comprehensive practical teaching of business multi-professional study and practice. Inter-professional comprehensive training is different from traditional theoretical courses or experimental courses (He, 2020; Gao & Jing, 2020). The roles and identities of teachers and students have changed. Teachers no longer teach theoretical knowledge, but are only the organizers, guides, and task controllers of the training (Kilminster et al., 2007; Taylor & Hamdy, 2013). The students are the "protagonists" of the training, participating in the work as a position in the workplace and completing the tasks assigned by the position. However, in actual teaching, students still do not switch roles and lack active learning and thinking. When encountering a problem, the first thing that comes to mind is to find a teacher (Edwards, 1998; Argyris, 1991). S/he does not consciously use the existing knowledge, does not know how to flexibly apply, and integrate the knowledge of various disciplines, has a poor sense of teamwork, and dare not try to explore. This is undoubtedly contrary to the teaching objectives. In this context, it is particularly important to improve students' enthusiasm for active learning, and to cultivate students' thinking ability, decision-making ability, innovation ability, and teamwork (Snyder, 2003; Mumtaz & Latif, 2017).

2. Research Status

In the existing research, scholars have made fruitful research achievements on this topic,

which can be roughly divided into the following research topics:

2.1 Research Status of "New Business" Talent Training

Han et al. (2021) analyzes the background, definition, and connotation of the "New Business", summarizes the core content of talent training of the "new business", and puts forward the path of business management talent training reform from the aspects of ideological and political construction, training scheme, teaching content, teaching mode and teacher team construction. Guo et al. (2021) believe that the "new business" should start from the training of ability-oriented applied talents, optimize, and innovate from the training objectives and ability positioning, curriculum system and teaching model reform, guarantee mechanism and evaluation system. Ni and Tang (2020), in the context of "New Business", proposed the integration of "ideological and political integration", "competition and curriculum integration", "flipped classroom", "school-enterprise training" and other teaching methods to cultivate new talents with innovative spirit and entrepreneurial ability. Zhang (2019) faced the new requirements for the training of new business talents (Zhao, 2011; He et al., 2017) and proposed the "flipped classroom" teaching method in order to cultivate students' marketing practice ability and innovation ability (He et al., (2017; Murillo-Zamorano et al., 2019).

2.2 Research Status of Inter-Professional Comprehensive Training

Xu et al., (2021) analyzed the problems existing in the current inter-professional comprehensive training teaching from the aspects of class setting, training content, training process design, training job assignment, training assessment, and teaching mode, and proposed targeted suggestions. Li and Cao (2021) effectively combined ideological and political education with the teaching of VBSE comprehensive training courses to deepen the reform of ideological and political teaching. Zhang (2020) analyzed the problems existing in the current inter-professional comprehensive training process and put forward relevant suggestions from the aspects of improving the teaching resource platform, establishing a teaching evaluation system, and enhancing the level of teachers. Zhu (2017) proposed the integration of different majors and the establishment of a cross-major comprehensive training platform, so as to promote the change of majoring students' thinking mode in different disciplines and strive to achieve the cultivation goal of application-oriented, compound, skilled and innovative talents.

2.3 Research Status of BOPPPS Teaching Mode

Huang et al. (2021), and Yulou et al. (2018) applied the BOPPPS teaching model to the course research in the medical field and found that the teaching satisfaction was high, and the teaching effect was remarkable. Huang (2021) and Fang (2021) integrated the BOPPPS teaching model with economics and management courses and found that students' learning interest and classroom participation increased, and students made significant progress in learning. Xie et al. (2021) and Chen et al. (2020) applied the BOPPPS teaching model to engineering disciplines, and experiments showed that the model conforms to the pyramid of students' cognition, which can improve students' self-efficacy and the timeliness of students'

learning knowledge.

To sum up, researchers have provided rich theoretical foundations, systematic thinking methods and guiding principles (Venkatesh et. Al., 2013; Guo et al., 2020), whether it is from the "New Business" talent training model, the research on inter-professional comprehensive training, or the teaching model. However, there is also the limitations of a single research discipline perspective. Under the background of "New Business" based on the BOPPPS teaching mode, this paper carries out teaching reform and practice on the cross-major comprehensive training in order to improve students' learning, thinking, practical, and innovation abilities and other goals, and to develop "New Business" talents needed for the country and society.

3. Problems Existing in the Teaching of Inter-Professional Comprehensive Training in Z School

The inter-professional comprehensive training course of Z school has been carried out six times, and it still needs some improvements in terms of teaching effect.

3.1 The Learning Objectives Are Not Clear, and the Learning Lacks Initiative

The inter-professional comprehensive training combines students from different majors (Paige et al., 2017), and then sets up job functions according to the operation process of the actual enterprise, and the students simulate different positions to work. In the entire simulation scene, there are virtual organizations including industrial and trade enterprises, manufacturing enterprises, logistics enterprises, social security bureau, market supervision bureau, tax bureau, banks, and service companies. Different types of virtual organizations have different functions, different positions, and different tasks (Hertel et al., 2005). After each student has applied for a certain position, s/he must complete the work of the position and participate in the business process of the enterprise in order to obtain the personal experience of running the enterprise. Then, in the process of training, some students have unclear learning goals, lack of initiative in learning, and do not pay attention to post work (Guskey, 2003; Abadzi, 2007). As a result, it is impossible to complete the work task within the stipulated working time, not only need to work overtime, but also affect the progress of other team members.

3.2 The Basic Knowledge Is Not Firmly Grasped and the Cohesion of the Inter-Professional Team Is Insufficient

In the whole training process, there are many aspects of knowledge involved, including management, human resources management, marketing, financial accounting, logistics, business etiquette, business negotiation, information system, international trade, etc. (Shenkar et al., 2014). The students have completed these courses before the practical training, so the basic theoretical knowledge in the early stage is relatively sufficient. However, during the training process, many problems occurred, such as the unclear recruitment process and the chaos on the recruitment site during the team formation process. Students do not use negotiation skills to maximize business interests until a purchase order is signed. In the logistics link, the relationship between goods, payment, and transportation is not clear, and it

seems that the contract has not been signed, and the goods have been dispatched. During the production process, before producing the semi-finished product, the production line has been scheduled to produce the whole product, resulting in logical problems such as the inability to complete the production task. The basic knowledge is not firmly grasped, and it conspicuously lacks flexibility. In addition, the employees of each enterprise are composed of students from multiple majors because they are not familiar with each other and lack the skills necessary to work together. There is a phenomenon that they do their own tasks, which deviates from the goals of the curriculum.

3.3 Insufficient Hardware Facilities and Low Enthusiasm of Students

There are about 100 students in each class of the inter-professional comprehensive training. Due to the limited laboratory space, it is impossible to accommodate all employees in one laboratory, so the enterprises need to be divided into different laboratories. This will easily lead to information asymmetry in the process of information transmission, students will ignore the teacher's information, and s/he will not be able to directly discover the students' problems. Currently, there is a lack of a unified mobile platform to realize online real-time transmission of data (Wang, & Wang, 2018), audio, video, data, etc., and it is impossible to improve students' participation in their classroom interaction.

3.4 Single Teaching Mode and Low Teaching Efficiency

In the current training courses, the teacher does not impart theoretical knowledge, but is only the organizer, guide, and task controller of the training. The teacher pushes tasks in batches according to the course design arrangement and the progress of the students. After the students receive the assignment, they will complete the assigned work according to the assignment requirements. In the teaching process, we only pay attention to the process and degree of completion of classroom training, ignoring pre-class guidance and post-class summary. Students also simply complete tasks as instructed and not focusing on the goals and possible rationale for each task. A single teaching model is not conducive to mobilizing the enthusiasm of students (Lu, & Han, 2018), but also cannot guarantee the teaching effect.

3.5 The Comprehensive Assessment Index System for Students Is Not Perfect

The current form of assessment only uses teachers as the main body of assessment, but the number of students in each batch of training courses is over 100, and the training content is huge and complex. The two full-time teachers cannot pay attention to the performance of each student in real time. The result evaluation ignores the training process evaluation and cannot comprehensively and effectively evaluate the training effect of each student. At the same time, the VBSE system can only provide real-time feedback to the teacher to display the completion rate of students' tasks (Selvaraj et al., 2021), but there is no correct rate, making it difficult for teachers to accurately determine the correct rate of all online business operations for students. This will weaken students' autonomous learning ability and enthusiasm for classroom participation.

4. Suggestions for Teaching Reform of Inter-Professional Comprehensive Training in Z School

4.1 Relevant Participants Should Change their Thinking

Inter-professional comprehensive training is different from conventional theoretical courses or experimental courses (He, 2020). In the training process, students are the main targets and teachers are supplemented. Students should change their mentality and identity from being a student to an employee, and switching from passive learning to listening to teachers, and from self-directed learning to teamwork. Teachers are no longer just imparting theoretical knowledge, but should be transformed into organizers, guides, and task controllers of practical training. Only when the ideology of both parties change can the training and teaching be better carried out; the better training effect can be achieved, and the goal of the course can be achieved.

4.2 Improve Teaching Facilities and Equipment

The smooth development of inter-professional comprehensive training is inseparable from the improvement of hardware facilities such as computers and a stable training platform (Ting, 2021; Engelseth et al., 2021). On the one hand, it is essential to strengthen laboratory construction to ensure the normal operation of various facilities and equipment. On the other hand, it is crucial to further promote the construction of informatization. The effective development of inter-professional comprehensive training requires further use of computer technology, network technology, multimedia technology and cloud technology to realize the organic combination of information network and practical teaching.

4.3 Reform of Teaching Mode

The BOPPPS teaching model was originally proposed by Canada to improve teachers' skills (Huang et al., 2019; Yang, 2020). It is a teaching goal-oriented and student-centered teaching model. The BOPPPS teaching model divides the whole teaching process into six modules: Bridge in, Objective, Pre-assessment, Participatory learning, Post-assessment, and Summary (Cui, 2019; Hu et al, 2022). The BOPPPS teaching model emphasizes participatory teaching. Students should change from "passive learning" to "active learning", realize exchanges and interactions inside and outside of the classroom, and strengthen students' learning depth and knowledge internalization. The BOPPPS teaching mode emphasizes the central status of students and the guiding role of teachers (Ma et al., 2021). Under the background of the new business, according to the characteristics of the course " Inter-professional Comprehensive Training ", this paper adopts the BOPPPS teaching mode to reform the teaching mode of the course to improve students' learning enthusiasm, self-learning ability, thinking ability, innovation ability and teamwork spirit.

According to the characteristics and goals of the "Inter-professional Comprehensive Training" course, combined with the BOPPPS teaching theory, the specific content and goals of this reform are shown in Figure 1 below:
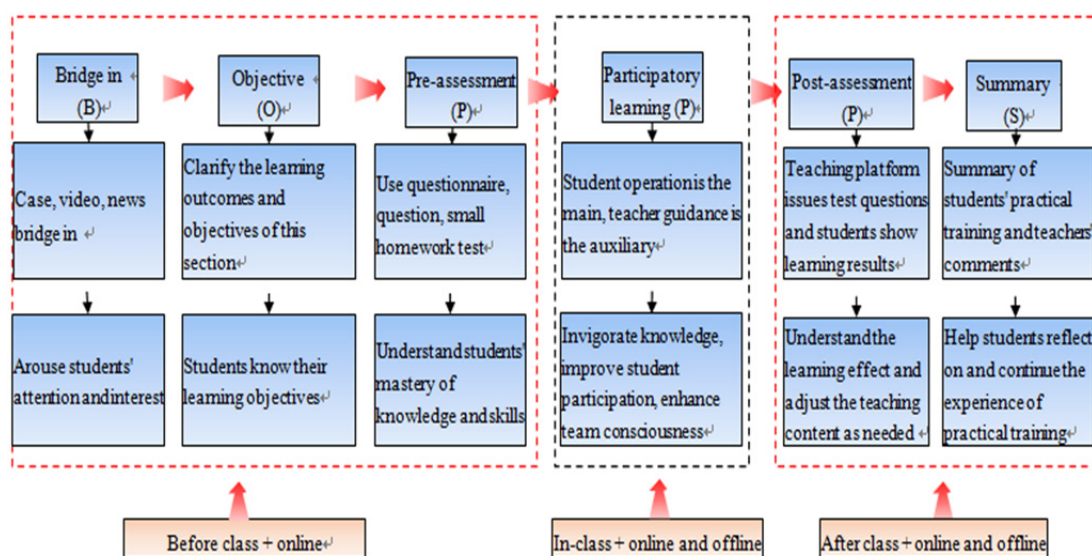
Figure 1. Teaching mode of Inter-professional Comprehensive Training

The BOPPPS teaching model designs the whole teaching process into six stages of " Bridge in, Objective, Pre-assessment, Participatory learning, Post-assessment, and Summary ". First bridge in videos or cases to attract students' interest in learning (Fan et al., 2020). Then, before teaching, it is important to clarify the teaching objectives, and conduct a pre-school test for teachers to understand the students' knowledge and ability of reserves, and then design interactive participatory teaching activities based on the test results. After the completion of teaching activities, it is of paramount importance to use tests and summaries to understand the students' mastery, and this summary is the next introduction. The whole process of the model is clear, from "shallow" to "deep" learning, from the outside to the inside, starting from the interest and ending with a summary, and the front and back are closely connected, which is in line with the laws of human cognition.
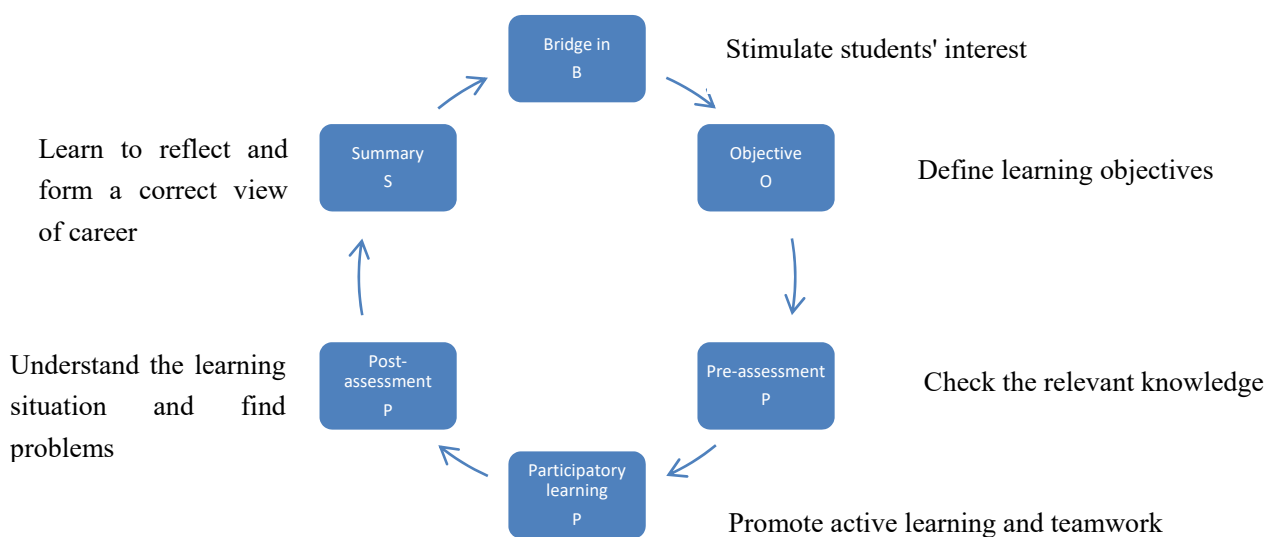

Figure 2. Implementation the process of BOPPPS teaching mode

4.4 Strengthen the Construction of Teaching Staff

It would be relevant to reform the traditional teaching mode to accumulate practical skills by arranging teachers to practice in enterprises (Gibb, 1993; Tynjälä, 2008). At the same time, senior management personnel of enterprises are hired into the classroom to impart real work experience. This will help improve incentive assessment measures, encourage teachers to develop their practical skills, and transform into "double-qualified" teachers.

5. Conclusion

The purpose of this study is to examine the development of inter-professional comprehensive training in Z school, analyzes its existing problems, and proposes the required teaching reform suggestions to provide reference for schools that carry out related courses. During the training, it was found that the students' basic knowledge is not strong, their enthusiasm for learning is not high, their active learning awareness is not strong, and their teamwork awareness is weak, which is contrary to the goal of this course. Therefore, through teaching reform, students' stock of knowledge can be revitalized, students' enthusiasm and initiative are mobilized, good professional quality and teamwork awareness are cultivated, and students' comprehensive ability is improved (Osterman, & Kottkamp, 2004; Lambert, 2003; Boyte, & Kari, 2000). This paper applies the teaching principles of BOPPPS to the teaching of "Inter-professional Comprehensive Training", from the teaching introduction, clear learning objectives, pre-class testing, participatory interaction, and after-class testing to learning summary (Zhang, 2020; Fan et al., 2020). In the teaching process, in addition to focusing on in-class teaching, links such as pre-class and post-class testing are also added, so that the teaching effect of the course is consistent with the talent training plan and course objectives under the "New Business". Through the teaching reform, the goal of improving students' learning ability, thinking ability, practical ability and innovation ability is achieved. At the same time, it helps students to develop good study habits and cultivate students' good professional quality and teamwork awareness.

6. Limitations and Recommendations for Future Studies

This research, like any research and all other forms of study, raises a number of interesting issues for further research. The present research was conducted in China, the data were only collected in the Chinese educational context. Therefore, the generalizability or transferability of this study to another different environment surrounding different research contexts should be done with caution. The author recommends that future studies should focus on different educational systems in order to make a greater contribution to the literature and be able to compare the findings.

Another limitation of this study is that this research is a conceptual paper. Future studies should consider using quantitative research methods to improve the quality of the findings. Future studies can also consider applying different approaches to influence the results of this type of research.

Finally, considering the method used in this study, we recognize that the study might have other methodological limitations. Future studies should try to find out how to measure the

construct of inter-professional comprehensive training and apply it in different research contexts to see what the implications of research findings would be.

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