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The Research on SPOC-Based International Trade Practice Blended Teaching Based on Cognitive Stratification Theory

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Abstract:
Based on the Amended Cognitive stratification theory,the article explore how to use the mixed teaching method of SPOC+offline classroom in the Course of International Trade Practice.Taking the every chapter as the unit to carry on the mixed teaching method:before the chapter teaching,the teacher guide students self-learning on line and the students self-learn the knowledge on line;the teacher flipped teach students on the offline classroom;the students improve the ability on line after the chapter,and Constantly improve the "online and offline" process assessment,thus play the important role of the students in the teaching,so that we can improve the students professional quality and the ability to analyze and solve problems.

Keywords:
Cognitive Stratification Theory;International Trade Practice; SPOC+offlineClassroom; Blended Teaching

1.Introduction

Under the backdrop of the "Internet + Education" era, with the aid of online learning systems as a supplement, the hybrid teaching of international trade practice is carried out by adopting the "SPOC + small classroom" approach. This vigorously promotes the integration of information technology and curriculum teaching, guiding teaching practices with cognitive hierarchy theory, which aligns with the objectives and requirements of international trade practice education.

2.Research Background

Based on the revised cognitive hierarchy theory, this study explores the blended teaching method of "SPOC + offline physical classroom", reforms educational and teaching methods, brings into play students' enthusiasm and initiative in learning, and improves students' professional quality and creative problem-solving abilities.

2.1.Cognitive Stratum Theory

American educational psychologist Bloom first proposed the Cognitive Domain Taxonomy in 1956: the

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educational cognitive domain goals are divided from low to high into six levels: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. With the development of related disciplines, Bloom's students Anderson and Krathwohl revised the cognitive taxonomy in 2001. The revised cognitive process is classified into six levels: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating, adding "Creating" as the top level of the original system [1]. According to the revised taxonomy, the first two belong to the lower levels of cognitive thinking activities, while the latter four belong to higher-level thinking skills. "Application" can be seen as a transitional stage for thinking skills from low to high, with the former being the premise and foundation of the latter. The main difference between the two is: Lower-order thinking mainly refers to the memory of knowledge, simple understanding, and passive use of information, while higher-order thinking is a comprehensive ability based on a higher level of cognitive level, including the process of actively and creatively handling original information, emphasizing the development of students' problem-solving abilities, autonomous learning abilities, creative thinking, and critical thinking abilities. Compared with Bloom's original classification system, the revised cognitive taxonomy is more operational in practice, providing a reference for teaching activities and teaching evaluation. Teachers can set teaching goals from the perspective of cognitive levels, design and carry out teaching activities, guide teaching practice, and improve formative evaluation .

The current foreign trade situation faced by China is extremely complex. With the continuous renewal of imported and exported goods and the rapid development of transaction technology, many difficulties encountered in import and export have never been seen before, and there are even no precedents to follow. This requires foreign trade clerks to flexibly use professional knowledge to creatively propose solutions. Therefore, the teaching of international trade practice courses should pay more attention to the cultivation of students' higher-level thinking abilities and practical abilities. Therefore, based on the cognitive taxonomy theory, how to effectively use classroom time to enhance students' higher-level business thinking abilities is an important issue that needs to be addressed in the current teaching of international trade practice courses.

2.2.Blended Learning Concept

Blended learning, also known as the "SPOC+Offline Classroom" model, integrates traditional classroom learning with SPOC online self-directed learning to leverage their complementary strengths. Professor Alan Garber from Harvard University has pointed out that in the future, online courses may become a widely effective teaching model and become a part of traditional classrooms. The integration of SPOC with subsequent classroom learning in blended teaching provides students with a more complete and in-depth learning experience, enhancing the integrity of the course [3].

The course "International Trade Practices" requires high practical operation skills from students. By adopting the SPOC blended teaching model, it optimizes and reorganizes teaching content and resources, constructs a mixed online and offline diversified teaching assessment system, providing more beneficial exploration for continuously improving students' practical operation abilities in import and export business.

3.Analysis of Issues in the Construction of the "International Trade Practice" Course

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3.1.Students' efficiency in utilizing uploaded online course resources needs to be further improved.

Teachers add relevant course resources to the online teaching platform, hoping that students will expand the breadth and depth of their professional knowledge through studying these resources. However, statistics from the teaching platform reveal that students treat the uploaded online resources differently: they download and utilize resources like courseware and assignments with high efficiency, almost without omission, but the download utilization rate for additional course resources is low. Only about 20% of students download all the supplementary materials, around 30% download some, and approximately 50% do not download any at all, let alone study them. Moreover, although some students download the additional resources, their actual usage rate cannot be assessed [4].

3.2. Students' participation in course instruction needs to be further enhanced.

Course instruction generally consists of three stages: pre-class preparation, classroom lecture, and post-class review and reinforcement. According to the teaching schedule, before learning new chapter content, teachers assign pre-chapter discussion topics online one week in advance to facilitate students' preview of the chapter. Statistics from the teaching platform indicate that students' enthusiasm for participating in topic discussions is closely related to whether the topic is associated with their prior courses or existing knowledge base. For example, the discussion on the role of foreign trade in the national economy during the introduction chapter's pre-reading phase is closely related to previous courses such as Western Economics, International Trade, and Political Economy. Students can participate and express their views without pre-studying the new chapter, so most of them engage and share their opinions. However, for the discussion on factors affecting the choice of trade terms between buyers and sellers in import and export trade during the International Trade Terminology chapter, students' enthusiasm drops significantly since this topic has not been covered in previous courses, and without pre-studying the chapter, they cannot contribute valuable insights. Consequently, only about 30% of students participate in this discussion, indicating that few students are genuinely preparing before class. During the classroom lecture, due to inadequate preparatory work by students, only a minority who have seriously prepared actively discuss difficult points and hot issues with the teacher, while the willingness of other students to participate in class discussions is noticeably low.

3.3.The effectiveness of flipped classrooms is not significant.

Although teachers actively introduce online teaching platforms to assist classroom instruction, attempting to change the traditional teaching method centered on lecturing, the results are minimal. Confined by traditional educational paradigms, on one hand, teachers have limited ability to flip the classroom and fail to fully engage students' enthusiasm for participating in class; on the other hand, students do not adequately prepare, preventing deep involvement in flipped classrooms. The classroom teaching still exhibits "hegemonic" thinking, with teachers talking more and students participating less, making it difficult to truly realize a flipped classroom [5].

3.4. Teaching effectiveness needs to be further improved.

In current international trade practice teaching, most of the teacher's time is still spent on superficial activ-

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ities such as reinforcing students' memorization and understanding of knowledge, without providing enough opportunities to cultivate higher-level cognitive thinking skills like analysis and creativity. Although teachers recognize the importance of advanced thinking, they design sessions such as discussing hot issues to ensure the integrity of the teaching content. However, due to many students' lack of foundational knowledge and incomplete internalization of learned material, their cognitive level cannot transform into higher levels, thus these teaching activities fail to achieve the desired outcomes.

3.5.mplementation of process-based assessment is challenging.

During the course construction period, although a combination of offline and online process-based assessments was adopted, offline assessments remained the primary method, with online assessments serving merely as an auxiliary approach and accounting for a low proportion of the final evaluation. Moreover, assessment results are still predominantly based on final exams, with process-based assessments only contributing as part of the regular grade to the overall evaluation. This is because, despite attempts to implement process-based assessments, no effective methods or projects have been explored. The process-based assessment indicators applied in course construction are too general, lacking in effective evaluation tools, and the assessment mechanism is not scientifically structured.

4. Cognitive Layering Theory Perspective on the Construction of a Blended Teaching Model for International Trade Practice Based on SPOC

To address the above issues, we explore the construction of a blended teaching method combining "SPOC + offline physical classroom" based on the revised Cognitive Layering Theory to enhance teaching quality.

The teaching design unfolds with each chapter as a teaching unit, based on the teaching objectives of each chapter. Following the Cognitive Layering Theory and the developmental law of cognitive levels from low to high, the teaching process is carried out in the form of "pre-chapter online self-study + offline flipped classroom teaching + post-chapter online expansion and enhancement." This step-by-step approach conducts corresponding teaching activities, allowing students to strengthen their thinking skills at different stages through completing tasks, emphasizing the students' principal role, and improving their professional competence and creative problem-solving abilities.

4.1 Pre-Chapter Work: Teacher Online Guidance, Student Online Self-Study

Firstly, needs analysis is conducted. Teachers analyze students' prior knowledge based on their previous courses, identifying the intrinsic connections between the knowledge points of the current chapter and the students' existing knowledge base. Then, combined with teaching objectives and societal demands, they categorize the knowledge points of the chapter into low-order thinking activities such as memorization and understanding, high-order thinking activities like application, analysis, and evaluation, and creative thinking enhancement activities according to the Cognitive Layering Theory.

Secondly, learning resources are released based on the needs analysis. Before studying the new chapter

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content, teachers upload a mind map of the chapter's knowledge to the class QQ group in advance, allowing students to overview the learning points of the chapter. They also release courseware, quality video lectures, classic cases, and related articles on the learning platform, facilitating students' self-study of the chapter's knowledge and independently completing the low-order thinking activities of memorization and understanding.

Lastly, a list of learning tasks is assigned. The forms of learning tasks can be diverse: case analysis, topic discussions, comparative analysis, hot debates, etc., which can be individual or group tasks, or a mix of both. These guide students to complete learning tasks through self-study and check whether they have achieved the learning objectives of memorization and understanding. For example, the pre-chapter self-study for "Negotiation and Establishment of International Goods Sale Contracts" could combine with the "Contract Law" from the previous course "Economic Law" to assign a group task for the pre-chapter: Are the conditions for the establishment and formation of contracts in the "Convention" consistent with those stipulated in our country's Contract Law?

During the teacher guidance and student self-study process, teachers should monitor students' learning status and provide online Q&A using platform functions, guiding students to complete tasks. They should also adjust subsequent offline classroom teaching designs based on student feedback and learning outcomes. The content of online learning should be integrated with classroom teaching content, complementing each other, and laying a solid foundation for designing higher-level thinking teaching activities in the following in-depth classroom learning.

4.2 Offline Classroom: Flipped Classroom Teaching

After completing the pre-chapter teacher-guided learning and student self-study, students have essentially finished the lower-order thinking activities of memorization and understanding. They then enter the offline classroom teaching stage, which is the most crucial part of the SPOC blended teaching model for the "International Trade Practice" course, and an important link in promoting the transformation of knowledge into skills. Through the offline physical classroom, teachers and students form a "seamless interaction" exchange, jointly completing the flipped classroom teaching. The "International Trade Practice" course emphasizes practical operations, and students need to possess the thinking and ability to apply professional theories to analyze and evaluate issues in import and export business. Through offline flipped classroom teaching, teachers and students jointly discuss the key and difficult points of the chapter, deepening students' understanding of these points, and use classic cases to cultivate students' higher-order thinking abilities to analyze and evaluate issues with professional knowledge.

In this phase, the teacher's work includes: First, providing timely feedback and evaluation on the difficult questions encountered by students during their initial self-study, and organizing the knowledge difficulties and key points based on the students' self-study as important content for classroom teaching. Second, based on the dual requirements of business communication and professional quality for foreign trade business personnel, teachers not only teach professional knowledge in the classroom but also focus on giving full play to the principal role of students, encouraging them to express their views bravely. During the teaching process, teachers may call on students who performed well in the pre-class self-study to express their opinions on a

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certain knowledge point to provoke debate or supplementation among classmates, or set up a competitive answering session to motivate students to actively express their views. If group tasks were assigned during the initial self-study, a presentation segment should be arranged during the classroom teaching, allowing competition between groups, with mutual evaluation accounting for 50% and the teacher's evaluation accounting for 50%, together constituting the assessment result for this task. Through these two methods, students are encouraged to actively participate in classroom teaching, think diligently, and express their opinions bravely, improving both their ability to solve and evaluate foreign trade business issues using professional knowledge and their business communication skills, thus achieving an upgrade from cognitive ability to a higher level of thinking. Additionally, designing teaching tasks should provide questions that require understanding, as well as those that demand analysis and creativity, to achieve the transformation of high-level cognitive skills of knowledge.

The biggest challenge in flipped classroom teaching is how to engage students in classroom teaching. Although teachers generally recognize that students are the main body of offline flipped classroom teaching, how can we truly realize the principal role of students in practice? First, enhance students' awareness of their principal role, making them realize that they are the main body of classroom teaching, not passive recipients. Second, encourage students to actively showcase the results of their self-study segments, enabling them to participate in classroom teaching and demonstrate their principal role. Third, teachers should adopt incentive measures, clearly informing students that participants in competitive answering or speaking can earn points, providing motivation for students to engage in classroom teaching. Lastly, teachers should act as good guides, creating a favorable atmosphere that stimulates active student participation, and when designing questions, they can be multiple-choice or true/false, first letting students make a choice, then asking for reasons, allowing students to gradually answer questions in-depth under the teacher's guidance [6]. For example, when distinguishing between the withdrawal, revocation, and effectiveness of an offer, a scenario is given, first letting students determine which situation it is, then guiding them to quote articles from the "Convention" to explain their reasoning, followed by asking other students to evaluate the student's answer, and finally, the teacher provides a summary evaluation, thus completing the flipped classroom teaching of that knowledge point.

4.3 Post-Chapter Work: Online Expansion and Enhancement

After the offline flipped classroom, the teacher has completed the explanation of the chapter content and then enters the post-chapter work: online expansion and enhancement to consolidate knowledge and skills, and to cultivate students' abilities to flexibly apply knowledge and creatively solve problems. With the continuous updating of international trade goods and the rapid changes in trading technology, many difficulties encountered in international trade are previously unencountered, and there may even be no precedents to follow. This requires foreign trade clerks to be able to flexibly use professional knowledge to creatively propose solutions. The goal of post-chapter work is to create conditions for further cultivating students' abilities and thinking to creatively solve problems through online expansion exercises.

In this stage, the main tasks of the teacher are: First, to assign online expansion exercises, embedding the key and difficult points of the chapter into the exercises, so that students can further consolidate their knowledge and skills through the exercises, laying a solid foundation for cultivating the ability to creatively solve problems. Additionally, in the expansion exercises, some comprehensive and challenging optional questions

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can be arranged for students who have spare capacity to voluntarily complete, and these are included in the process assessment to enhance the problem-solving abilities of these students. Second, to conduct online Q&A sessions simultaneously, to resolve doubts for students, and to eliminate obstacles in learning the course one by one. Finally, to provide evaluation and summary for each student's completed exercises, pointing out their shortcomings and offering methods for improvement, while also engaging in self-reflection and summary, to accumulate experiences and lessons for the next teaching session, achieving mutual growth in teaching [7].

Students remain the protagonists in completing the post-chapter work tasks. First, by completing the expansion exercises, students connect the scattered knowledge points of the chapter and reflect upon them slowly, forming a complete knowledge system. Second, through these expansion exercises, students can test whether they have mastered the key and difficult points of the chapter, thus identifying and addressing any gaps. Finally, through repeated practice of online expansion exercises, students can further enhance their cognitive level and develop the correct mindset for handling foreign trade business.

4.4 Final Work: A comprehensive evaluation is formed based on the results of the process assessment.

In the context of SPOC blended learning, we continuously refine the online + offline process assessment method based on the classification of cognitive domain goals. The weight of the assessment should consider not only the actual completion by students but also the positioning of objectives in the talent training program, as well as the significance of each chapter's content within the international trade practice course system [8].

For undergraduate institutions focusing on international trade, the talent training objectives emphasize cultivating students' higher-order thinking abilities, that is, the ability to analyze and evaluate using professional knowledge. Therefore, the performance of students during the offline flipped classroom phase in SPOC blended learning is of utmost importance in the process assessment, and its weight can be set at around 60%. For lower-order thinking activities, which are less challenging, students can generally achieve the cognitive level of memorization and understanding through online self-study if they keep up with the teacher's pace, and the weight for these can be set at about 30%. Higher-order thinking enhancement activities are more challenging and are mainly optional tasks assigned to students who are capable of more. The weight for online extension and enhancement can be set at about 10%, preserving ample opportunity for outstanding students to excel.

5. Conclusion

Compared to solely online or offline teaching, "SPOC + offline physical classroom" blended learning has clear advantages, allowing for full student participation both online and offline, inside and outside the classroom [9]. The limited class time of the "International Trade Practice" classroom cannot guarantee the effective development of students' cognitive activities at all levels. Therefore, teachers can make use of "SPOC + offline physical classroom" blended learning. According to the cognitive hierarchy theory, they can guide students to complete lower-order thinking activities such as memorization and understanding before the chapter, integrate higher-order thinking activities that involve analyzing and evaluating professional knowledge into

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the offline flipped classroom teaching effectively, and then enhance creativity through online extensions after the chapter. This approach fosters a creative capacity in students and realizes an organic integration of online and offline learning, meeting the new demands of digital era for "International Trade Practice" teaching.

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