Exploration of Supply Chain Finance Course: Teaching Reform from the Perspective of Interdisciplinary Integration

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Abstract. In recent years, supply chain finance has become an important means of financing structure reform and serving small and medium-sized enterprises in China. Supply chain finance involves knowledge from multiple disciplines, and there is an urgent demand for high-caliber personnel in the industry, which poses new requirements and challenges for the teaching of supply chain finance courses. This article analyzes the teaching issues present in supply chain finance courses from the perspective of interdisciplinary integration and proposes goals for course reform. It explores teaching reforms based on the course implementation plan, aiming to overcome the limitations of traditional supply chain finance courses and promote the development of interdisciplinary courses.

Keywords: Interdisciplinary integration; Supply chain finance; Course Reform

1 INTRODUCTION

Interdisciplinary integration involves combining information, data, technology, tools, perspectives, concepts, or theories from two or more disciplines [4]. It can promote the integrated development of liberal arts education and represents the direction of advancement for the construction of new liberal arts in China.

Supply chain finance, driven by significant talent demand and national policy support, has seen universities across the country committed to developing professionals in this field. However, supply chain finance has been introduced to China for a relatively short period, the talent development in this discipline is still in the exploratory stage. Supply chain finance involves knowledge from various disciplines such as finance, logistics, insurance, the Internet of Things, big data, and international trade. It is necessary to connect knowledge across different disciplines and to attach great importance to the accumulation of knowledge and practical experience, making talent development quite challenging.

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2 ISSUES EXISTING IN SUPPLY CHAIN FINANCE COURSES IN THE CONTEXT OF INTERDISCIPLINARY INTEGRATION

2.1 Poor Integration of Interdisciplinary Knowledge with Severe Knowledge Segmentation

Supply chain finance is an interdisciplinary course that involves multiple fields of study. However, most teachers focus on financial theories, explaining various financing models, processes, and risks, with less emphasis on the application of logistics, management, information technology, and other related disciplines. The integration of interdisciplinary knowledge is not evident. Some teachers do provide explanations of other disciplines, but usually they only superficially introduce their definitions and characteristics with a lack of teaching strategies and effective lesson plans. Students, therefore, have a limited understanding of the roles and functions that other disciplines play in the process of supply chain finance. The integration of interdisciplinary knowledge is poor, and the multidisciplinary knowledge students acquire is fragmented. Students are unable to build a multidisciplinary system or develop a multidimensional way of thinking, which is necessary for using interdisciplinary knowledge to analyze and solve practical problems[5].

2.2 The course Primarily Focuses on Theory and Lacks Practical Teaching Components

Currently, supply chain finance courses are primarily taught through theoretical lectures. This approach does not effectively integrate knowledge from various disciplines, nor does it incorporate practical teaching methods such as Problem-Based Learning (PBL) and case studies. Students passively receive knowledge without a process of thinking and practicing, which results in a lack of deep understanding and application of the knowledge, diminishing their interest in the course. Although some teachers may incorporate case studies into their teaching, the analysis and interpretation of these cases are still mainly conducted by the teacher, without truly achieving practical teaching. As a result, students' learning is confined to theoretical level., without in-depth perception and practice of actual applications. This approach does not cultivate students' skills in analysis and problem-solving, fails to their independent inquiry and critical thinking, and stifles their creativity.

2.3 Single Assessment Framework

A common issue with traditional teaching in supply chain finance is the singularity of assessment methods, primarily focusing on examinations. Emphasizing exam preparation can hinder creativity and innovation since students may be less inclined to explore topics beyond the exam syllabus. Additionally, exams can only assess a few ranges of skills and knowledge like theoretical knowledge and memorization

work and students while their ability of problem-solving, practical application and critical thinking might not be well captured as exams potentially disadvantages students who perform better in other forms of assessment. Apart from this, exams offer limited opportunities for continuous feedback, which is essential for student development and progress.

3 MAIN GOALS OF SUPPLY CHAIN FINANCE COURSE REFORM

3.1 Breaking Down Disciplinary Barriers for Knowledge Integration

One of the most important links in developing an interdisciplinary supply chain finance course is to break down the previously distinct disciplinary course systems. By reallocating resources through interdisciplinary integration, it is easier for students to study and apply knowledge, methods, and skills from various disciplines, establishing a comprehensive curriculum system encompasses fields such as finance, logistics, and management, to construct a comprehensive curriculum system that encompasses multiple fields of study. A specific and effective teaching approach and methodology are summarized for future teaching. This approach expands students' understanding of the various disciplinary knowledge involved in supply chain finance courses, forming a more comprehensive and systematic knowledge system. It aims to explore new fields, use integrated tools, and provide creative problem-solving solutions, thereby promoting the development of supply chain finance courses.

3.2 Enhancing Practical Skills and Fostering Innovative Thinking

Talent in supply chain finance needs not only theoretical knowledge from interdisciplinary fields such as finance and management but also a practical understanding of operational processes, risk assessment and control, verification, and corporate credit evaluation. The ultimate goal of the course is to cultivate application-oriented professionals in supply chain finance who possess diverse knowledge and innovative thinking. Therefore, students should engage in learning across disciplines like supply chain management, finance, and information technology, as well as participate in interdisciplinary case analyses, project practices, and simulation exercises to understand the entire operation of supply chain finance. They should also be able to develop, design, and integrate tools and methods from various disciplines to creatively solve practical issues in supply chain finance, demonstrating comprehensive analytical decision-making abilities and innovative thinking.

3.3 Cultivate Versatile Talents to Meet Market Demands

According to Li, H (2023), the new technology and new format put forward new requirements for the knowledge and ability of business talents. Under the current new business background, reform of teaching content of supply chain management course

is necessary [3]. There is a noticeable scarcity of innovative talents at various levels in the supply chain finance field. Supply chain finance courses should enhance the training paradigm that integrates knowledge and skills across various fields, closely align with the industry's development trends, and cultivate versatile talents who possess both professional knowledge and practical capabilities, are well-versed in relevant laws and regulations, and are up-to-date with the latest information and technology in supply chain finance, in order to meet the evolving needs of societal development.

4 COURSE REFORM MEASURES OF SUPPLY CHAIN FINANCE

4.1 Practical Teaching Facilitates Interdisciplinary Integration

The supply chain finance course has the characteristic of interdisciplinary integration. If the knowledge from various disciplines is taught in simple and isolated manner, students often perceive each discipline as fragmented and separate. The application of supply chain finance in reality is complex and requires the comprehensive use of knowledge and tools from multiple disciplines to find solutions. Practical teaching methods such as case analysis, project practice, and simulation exercises should be employed to continuously integrate knowledge from different disciplines into practice. This approach aims to cultivate students' ability to utilize interdisciplinary knowledge and methods to solve comprehensive issues in supply chain finance. Taking case study as an example, Figure 1 illustrates how to integrate knowledge from other disciplines such as supply chain and international trade into the case of " How does supply chain finance promote the development of the motorcycle industry." This approach guides students to analyze and discuss the financing difficulties and high costs faced by upstream and downstream enterprises in the motorcycle industry. During the analysis, knowledge from logistics and finance is infused. As students are guided to consider solutions, knowledge of supply chain finance is further introduced. Finally, when discussing how to prevent credit risks, knowledge from the field of information technology is integrated.

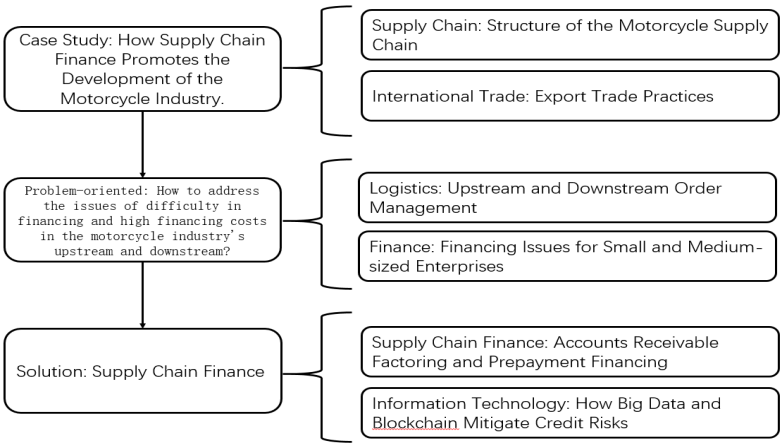

Fig. 1. How to Integrate Disciplinary Knowledge in Practical Teaching Using Case Analysis.

4.2 Utilizing Knowledge Map to Connect Interdisciplinary Knowledge Points

A knowledge map is a method that uses a graphical model to describe knowledge and simulate the relationships between all things in the world [1]. By using nodes and edges, it visualizes complex knowledge systems, making the structure, hierarchy, and relationships of knowledge clear at a glance. Firstly, knowledge graphs can help students establish a clear interdisciplinary knowledge network, thereby deepening their understanding and memory of supply chain finance course knowledge. Interdisciplinary courses often tend to fragment and separate knowledge from various fields, while knowledge map can organically connect scattered knowledge points and clearly display the connection points between different disciplines. Students can also encounter unfamiliar knowledge from other disciplines during their studies, with a click on certain node on the knowledge map, students can learn the relevant content. This can deepen students' understanding and memory of course knowledge and help them quickly grasp the overall framework of the course. Secondly, knowledge graphs help cultivate students' innovative thinking and problem-solving abilities. Through knowledge map, students can more conveniently explore the connections and intersections between different knowledge points, thereby stimulating new thoughts and ideas. Lastly, when encountering problems, students can also use knowledge map to quickly locate and analyze the issues, finding effective ways to solve them.

4.3 Using Digital Learning Resources to Assist in Interdisciplinary Knowledge Learning

By constructing a digital teaching resource platform, a blended teaching model that combines online and offline approaches for supply chain finance can be implemented to assist in interdisciplinary knowledge learning. Jansen et al. (2023) explored the

online learning combined with “flipping the classroom” and blended learning as alternatives for conventional teaching approaches. The research finds that blended learning can facilitate the collection of data on student performance and engagement, which helps educators adjust their instruction and interventions as needed [2]. On the digital learning resource platform, supply chain finance textbooks and reference materials can be uploaded. It is also possible to provide cases, extended readings, latest reports, regulations and teaching video resources from platforms like MOOC (Massive Open Online Course) for auxiliary teaching of interdisciplinary knowledge which can expand and deepen students' knowledge horizons. On this platform, students can engage in activities such as submitting homework, studying course materials, participating in online discussions, voting, and completing online exercises, facilitating online learning and feedback. The platform provides students with more flexibility and extensibility in their study time and offers a richer array of learning resources. Additionally, the interactivity and enjoyment of learning are enhanced. This plays a significant role in enhancing students for autonomous learning, increasing their interest in study, and promoting their understanding and application of interdisciplinary knowledge.

4.4 Recognising the Learning Needs of Students: A Multifaceted Assessment Approach

Based on the issue mentioned above, this paper proposes a multifaceted assessment approach to address the limitations of conventional evaluation methods that prioritize exams within an interdisciplinary supply chain finance course. By incorporating different assessment techniques such as continuous feedback, collaborative teamwork and Practical evaluation, the proposed approach seeks to promote a more profound integration and application of knowledge and skills. A multifaceted assessment approach is therefore essential for effectively measuring and improving interdisciplinary learning outcomes in supply chain finance education.

5 CONCLUSIONS

Interdisciplinary integration is an essential aspect of course construction and a crucial pathway for cultivating versatile and applied talents. From the perspective of interdisciplinary integration, this paper analyzes the current issues in the teaching of supply chain finance courses, discusses the goals of curriculum reform, and proposes reform measures for supply chain finance courses from four aspects: practical works, knowledge map, digital learning resource platforms, and course assessment. The objective is to enhance students' interdisciplinary skills and support their holistic development through course reform. Additionally, it serves as a reference for interdisciplinary integrated teaching.

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