

Research on the Construction of Cross-School Course Offerings from the Perspective of "Industry-Education Integration Teaching Mode"—Taking the "Introduction to Social Security" Course at Liaoning University of International Business and Economics as an Example

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Abstract: Cross-school course offerings represent a novel educational model that has emerged under the backdrop of "Internet + Education". The implementation of this model facilitates the complementary advantages of teaching resources, explores new educational paradigms, and emphasizes the cultivation of students' autonomous learning abilities. However, this model also encounters challenges such as lax supervision of online lectures, insufficient innovation in teaching formats, a lack of offline guidance for institutions utilizing the courses, and traditional, monolithic forms of assessment. Taking the "Introduction to Social Security" course at Liaoning University of International Business and Economics as an example, this study explores the establishment of an industry-education integration model for cross-school course offerings: (1) Constructing a curriculum system that integrates industry, education, government, and enterprises through quadripartite collaboration; (2) Utilizing an online platform to enable multi-party joint monitoring of students' learning progress; (3) Promoting the interconnected development of all parties involved in the course, providing guidance and norms for course construction, utilization, platform support, and student cultivation, in order to continuously improve the application effectiveness of the course.

1. Background of the Development of Cross-Institutional Course Enrollment

Cross-institutional course enrollment represents an active exploration of the "Internet + Education" model. This model leverages the technological and platform advantages of the Internet

to disrupt traditional educational paradigms, relying on third-party online teaching management platforms. Building upon the high-quality online courses previously offered by various institutions, students can transcend geographical boundaries and, based on agreements reached between universities, select and enroll in elite online courses from other institutions to earn credits. These credits, upon verification by their home institution, are recognized accordingly. This constitutes a novel teaching model grounded in the Internet.^[1]

In recent years, with the accelerating process of aging, cultivating new talent in elderly care services has become a crucial aspect of talent development and an important issue faced by higher education. Institutions that meet the necessary conditions have continuously engaged in practical explorations in the realm of cross-institutional course enrollment, accumulating rich practical experience. Concurrently, students' interest in cross-institutional learning has been steadily increasing. Since 2014, the Office of the Liaoning Provincial Department of Education issued the "Notice on Carrying Out the Application for Pilot Universities of Online Cross-Institutional Course Enrollment for Ordinary Undergraduate College Students." Subsequently, universities within Liaoning Province began to explore and implement cross-institutional course enrollment systems. Over the past decade, the development of cross-institutional courses has been continuously promoted and refined. In 2021, the educational departments of Liaoning, Jilin, Heilongjiang provinces, and the Inner Mongolia Autonomous Region jointly released the "Guiding Opinions on Promoting Open Education, Strengthening Cooperation, and Achieving High-Quality Development in Ordinary Higher Education Institutions." This guidance further deepened the concept of cross-institutional course enrollment, expanded the scope of course construction, and facilitated innovation in course research content.

Liaoning University of International Business and Economics has actively responded to policy calls by initiating relevant courses and engaging in joint teaching collaborations with other universities within the province.^[2] The aim is to explore new models of cross-institutional course enrollment. Taking the "Introduction to Social Security" course as an example, this course adopts a combined online and offline teaching mode, co-constructed with multiple universities within the province, realizing the sharing and co-construction of high-quality educational resources. During this exploration, universities have engaged in positive and effective interactions. Moreover, within the context of cultivating talent in elderly care, the university has also explored new directions for improving course quality and recognized the necessity of creating elite courses.

2. Significance of Cross-Institutional Course Enrollment Construction

2.1 Promoting Educational Equity and Realizing Resource Complementarity

The cross-institutional credit course program, relying on third-party teaching management platforms, has achieved online sharing of high-quality educational resources both within and outside the province. These resources encompass professional, high-quality courses and distinctive curricula, aiming to provide students with more high-quality course options and thereby maximize course benefits.^[3] The course selection process for cross-institutional credit courses covers student groups from universities within the region. Therefore, the applicability of the courses is proportional to the number of students enrolling, which further determines the practical role that the courses can play. Under this model, course-providing universities can obtain more course practice information and further optimize courses with feedback from different students. Meanwhile, for course-utilizing universities, this helps promote the development of weaker disciplines by learning from the course advantages of other schools through information platforms. Furthermore, students can access higher-quality course content and receive diversified, high-quality education, which aligns with the demand for cultivating innovative talents. In the process of course construction,

close communication and exchange between course-providing and course-utilizing universities are necessary. This objectively promotes teacher exchange and cooperation among universities. Therefore, realizing the complementarity of course resources and conducting joint construction and sharing of inter-university courses play an important role in promoting educational equity and improving teaching quality that cannot be ignored.

2.2 "Internet + Education": Exploring New Educational Models

During the pandemic, many courses shifted to online or blended online-offline teaching modes. How to break the traditional single face-to-face teaching mode and fully leverage the advantages of Internet technology and the resources of online teaching platforms has become a key exploration direction for many universities in innovating classroom teaching. ^[4]Liaoning University of International Business and Economics' "Introduction to Social Security" course adopts a blended online-offline teaching method. The course releases course resources on the Chaoxing Learning Platform at regular intervals, with each class complemented by online quizzes related to the course content to instantly obtain course feedback, effectively assessing students' online learning effects. Student quiz data is fed back to the instructors through the backend system, helping them understand students' learning situations and provide targeted supplementary explanations and Q&A for content that students have not grasped well in offline classes. With the help of online course resources, students can complete the learning of basic knowledge online, and instructors can expand and supplement related content in class, which is the best way to resolve the contradiction between tight class schedules and overly packed course content. In the course, instructors also organize students to apply what they have learned in practice. Meanwhile, the blended online-offline teaching method greatly liberates teachers. Teachers do not need to repeatedly explain the same basic knowledge points, allowing them to invest more energy in answering students' questions, optimizing the course system, and improving their own educational and teaching methods. This will help achieve dual improvements in discipline level and teaching quality.

2.3 Returning to Student-Centeredness and Cultivating Autonomous Learning Ability

The cross-institutional credit course system exhibits high flexibility and autonomy. The deep integration trend of information technology and education requires students to shift from traditional learning modes, actively utilize information technology means, and through cooperative learning, seminar learning, and other methods, autonomously explore and internalize knowledge to complete learning tasks. Its flexibility is mainly reflected in students' freedom to choose learning time and location, allowing them to study the same content multiple times, extending course learning from the classroom to daily life, and breaking the limitations of fixed course modes, thereby encouraging students to learn in life and apply what they have learned to real-life situations. Its autonomy is mainly reflected in the expansion of students' autonomy in course selection. Through the course mutual selection mechanism, students can fully understand the course content during the course selection stage and make choices that meet their own needs. This autonomous choice helps students clarify their learning directions and explore learning methods that suit them through diversified learning approaches, thereby cultivating autonomous learning abilities. The cross-institutional credit course system satisfies students' personalized learning needs, allowing them to formulate plans that align with their individual learning characteristics based on their own interests and abilities. In this process, students' autonomous learning abilities are enhanced, their independent thinking abilities are strengthened, and their horizons are broadened, with their thinking expanded as well.

3. Design and Teaching Implementation of the Cross-Institutional Course on Introduction to Social Security

3.1 Course Design

The Introduction to Social Security course offered by Liaoning University of International Business and Economics constitutes a core compulsory course for the major in Senior Care Service Management. The cross-institutional version of this course is under the responsibility of Shenyang Normal University, which is tasked with assembling the teaching team and undertaking the design of both teaching content and methodologies. Students are required to engage in learning activities through an online course platform. Upon completion of the course, the teaching team from Shenyang Normal University will be responsible for assessing students' performance. The respective institutions of the students will then evaluate and award academic credits based on their performance in the course. In accordance with the teaching requirements stipulated by the Liaoning Provincial Department of Education, and after considering the actual teaching circumstances of the Introduction to Social Security course at Liaoning University of International Business and Economics, as well as discussions among the project research group faculty, the implementation of cross-institutional teaching has been divided into three phases (see Figure 1).

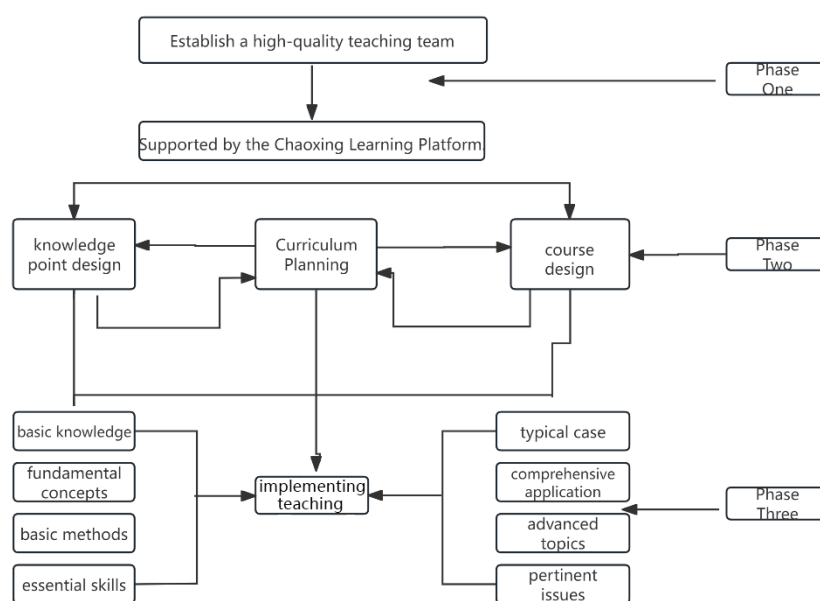


Figure 1: Implementation of Cross-Institutional Course Study

3.2 Teaching Implementation

The cross-institutional course on Introduction to Social Security comprises a total of 32 credit hours, with 24 hours dedicated to online video instruction and 8 hours to offline teaching. This blended learning mode endows the course with a high degree of autonomy and flexibility. The teaching plan design encompasses three major aspects: course planning, knowledge point design, and curriculum design.

Course planning involves the planning of teaching content, scheduling of instruction, compilation of lesson plans, and production of teaching materials, while also clarifying the manner and format of content presentation. Knowledge point design primarily revolves around the key and challenging content of the course, for which detailed teaching plans and arrangements are

formulated. Curriculum design focuses on selecting teaching methods and determining approaches to explaining knowledge points, aiming to achieve the overall planning objectives of cross-institutional teaching for the Introduction to Social Security course through adequate preparation and rational arrangement of teaching tasks.

Lastly, the teaching syllabus for the Introduction to Social Security course is developed and refined, and a specific execution plan for cross-institutional teaching is formulated through collective deliberation by the research group teachers (see Table 1).

Table 1: Teaching Execution Schedule

Content of courses	Teaching resources	Teaching methods	Explanation method
Overview of social security	Online Teaching Videos and Exercises	Combining online and offline teaching	theoretical teaching
Theoretical foundations of social security	Online Teaching Videos and Exercises	Combining online and offline teaching	theoretical teaching
old-age protection	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
Overview of the medical security system	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
employment protection	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
social welfare	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
social assistance	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
Supplementary protection	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases
Social Security Fund	Online Teaching Videos and Exercises	Combining online and offline teaching	Combination of theory and cases

4. Challenges in the Development of Cross-Institutional Course Offerings

4.1 Difficulties in Online Course Monitoring

A prominent feature of cross-institutional courses lies in the extensive utilization of online teaching platforms. Students can engage in self-directed learning through course videos, participate in discussions, and complete assignments via these networks. However, this autonomous learning model also poses regulatory challenges. Within the online teaching environment, instructors face obstacles in real-time monitoring of students' attendance and assessing their actual engagement in

the learning process. Taking the "Introduction to Social Security" course at Liaoning University of International Business and Economics as an example, while the system can record the duration of video views, it fails to accurately reflect whether students are attentively listening and actively thinking. Students may merely play the videos, potentially engaging in other activities simultaneously, thereby compromising learning efficacy. Another crucial factor contributing to the challenge of online monitoring is the variation in students' self-discipline. In traditional classroom settings, teachers can enforce discipline and ensure student focus through methods such as roll calls. However, such direct regulatory measures are difficult to implement in the online realm. Significant differences in self-discipline exist among students, with some lacking sufficient self-restraint to guarantee the quality and duration of their online learning. In the "Introduction to Social Security" course, students with weaker self-discipline may fail to complete tasks on time or even abandon online learning altogether, leading to lagging course progress and inadequate grasp of key concepts.

4.2 Limited Innovation in Teaching Formats

Firstly, despite the intention of cross-institutional courses to transcend the limitations of traditional teaching models, many courses in practice still adhere to conventional methods such as lecturing and rote memorization. Teachers often prioritize the imparting of theoretical knowledge while neglecting the cultivation of students' practical abilities and innovative thinking. This teaching mode not only fails to stimulate students' interest but also restricts the diversity and innovation of course formats. Secondly, the core of industry-education integration lies in deep collaboration between enterprises and schools, involving joint participation in course design, implementation, and evaluation. However, in the current development of cross-institutional courses, this deep integration is not fully manifested. Taking the "Introduction to Social Security" course as an example, although the course attempts to incorporate enterprise cases and practical components, due to a lack of close cooperation and communication with enterprises, these cases are often outdated or disconnected from reality, failing to accurately reflect actual enterprise needs and the latest developments. Lastly, teachers are pivotal in course design and implementation. However, within the current educational system, many teachers are still accustomed to traditional teaching modes and methods, lacking innovative consciousness and capabilities. Some teachers, constrained by their own experience and knowledge structure, may find it difficult to design teaching plans that are both innovative and practical. Furthermore, the scarcity of teacher training and advancement opportunities limits their exploration and practice in teaching format innovation.

4.3 Insufficient Offline Guidance from Host Institutions and Urgent Need for Industry-Education Integration Models

A notable characteristic of cross-institutional courses is that they allow students to take courses offered by external institutions (i.e., course-providing institutions) at their own institutions (i.e., host institutions). However, under this model, host institutions often lack offline guidance resources that align with the courses. Using the "Introduction to Social Security" course at Liaoning University of International Business and Economics as an example, although the course provides abundant teaching resources on the online platform, students often struggle to obtain timely offline guidance and answers to specific questions encountered during their actual learning process, such as theoretical misunderstandings and practical application difficulties. This lack of offline guidance not only affects students' learning outcomes but also diminishes the appeal and practicality of cross-institutional courses. The industry-education integration teaching model emphasizes deep fusion between education and industry, aiming to enhance students' practical abilities and professional qualities through school-enterprise collaboration and alternating work-study

arrangements. However, in the development of cross-institutional courses, the application of the industry-education integration model is relatively lagging. On the one hand, there is a lack of deep industry-education integration cooperation between host and course-providing institutions, resulting in a disconnect between course content and industry needs, making it difficult for students to apply their knowledge in actual work scenarios. On the other hand, host institutions themselves have limited resources and experience in industry-education integration, making it challenging to provide effective practical guidance and internship opportunities for students.

4.4 Singular Form of Assessment

Regarding the current implementation of cross-institutional courses, the assessment and grading model remains confined to the traditional framework of "regular grades + final grades." In traditional teaching, assessment typically combines regular grades (including platform quizzes, post-class discussion participation, classroom participation, etc.) with final exams or course papers. Under this assessment model, students tend to use search software or exchange answers during tests, while post-class discussions often become formalities, with students merely posting superficial comments to meet platform scoring requirements, resulting in low classroom participation. At the end of the term, students cram for exams or cobble together papers due to score pressure. This assessment model, though seemingly diverse, is actually singular, exerting negative impacts on both course implementation effectiveness and students' knowledge mastery. Therefore, it is necessary to innovate the course assessment model to ensure effective supervision and guarantee of learning outcomes without damaging students' learning interest.

5. Construction and Innovation of Cross-Institutional Credit Courses

5.1 Establishing Industry-Education Integration Courses through "University-Government-Industry-Enterprise" Collaboration

Firstly, it is essential to delineate the roles and responsibilities of the "university-government-industry-enterprise" quartet in the co-construction of courses, with the overarching goal of cultivating high-quality, applied talents endowed with social responsibility, innovative spirit, and practical abilities. Adhering to the principles of demand orientation, resource sharing, complementary advantages, and mutual benefit ensures the smooth progression of collaborative efforts. The government should play a guiding role, encouraging and supporting deep cooperation between universities and industry enterprises through policy incentives and financial investments. As the primary collaborators, universities should actively align with the needs of the government, industry, and enterprises, integrating high-quality educational resources both within and outside the institution, including faculty, experimental and training facilities, and curriculum resources, to provide robust support for the co-constructed courses.

Industry enterprises should deeply engage in the design and development of course content, incorporating real-world cases, project-based practices, and other elements that reflect industry trends and actual enterprise demands. This enriches the course content and enhances its practicality and relevance. Additionally, emphasis should be placed on the continuous updating and iteration of course content to ensure it keeps pace with the evolving times. In the teaching of the "Introduction to Social Security" course, innovative teaching modes such as blended learning, project-based learning, and flipped classrooms are actively explored, leveraging modern information technology to enhance teaching effectiveness and learning experiences. Simultaneously, practical teaching components are strengthened through school-enterprise cooperation, internships, and training, thereby bolstering students' practical abilities and professional competencies.

5.2 Joint Monitoring of Learning Progress through Online Platforms

A significant challenge in managing cross-institutional credit courses lies in ensuring the quality of online lectures for students. Utilizing online platforms, such as Rain Classroom, XuetangX, and Learning Pass, is crucial for backend supervision. [5] Taking the "Introduction to Social Security" course at Liaoning University of International Business and Economics as an example, the course employs Learning Pass as its online resource. As shown in Figure 2, after each section, feedback on course content is collected through quizzes, with student responses reflected in real-time statistics on the backend. Teachers can clearly view various data, including knowledge point mastery rates and question accuracy rates. This enables targeted explanations in offline classes based on classroom exercise performance. Furthermore, leveraging the advantages of online platforms allows for timely statistics on students' online course viewing times, durations, and participation in course discussions. Teachers can aggregate this information to conduct formative evaluations of students, avoiding reliance solely on assignments and exams for final grades. Instead, a more objective and comprehensive assessment of students' learning is achieved through multifaceted evaluations.

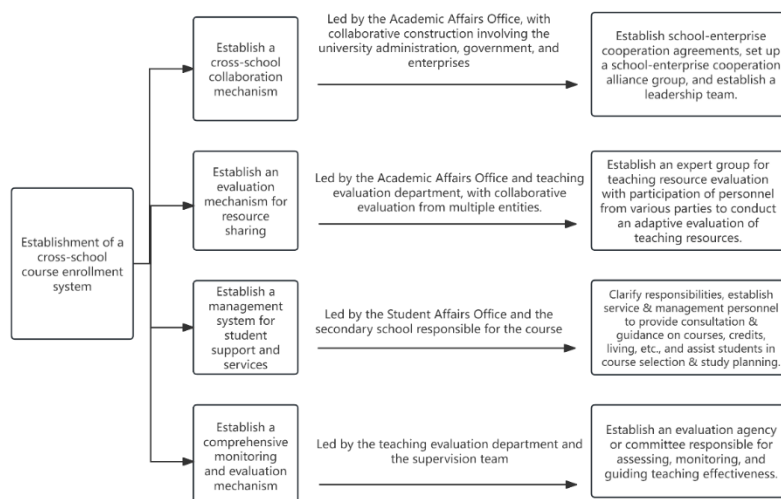


Figure 2: Schematic diagram of the construction of cross-campus courses

5.3 Realizing Multi-Stakeholder Collaboration for Course Development

Higher education institutions, as the primary providers of courses, should enhance their collaborative cooperation. By signing cooperation agreements, sharing teaching resources, and mutually recognizing credits, inter-institutional barriers are broken down, enabling optimal allocation of course resources. Students, as both the direct beneficiaries and important participants in the course construction process, should be encouraged to actively engage in course construction and evaluation, offering their opinions and suggestions. Means such as establishing student representatives and conducting course satisfaction surveys can be employed to promptly gather student feedback, continuously optimizing course content and teaching methods.

Teachers, as the implementers of course instruction, directly influence the teaching quality with their professional competence and teaching abilities. Therefore, it is crucial to strengthen teacher training and support to enhance their teaching proficiency and industry-education integration capabilities. Measures such as organizing teaching seminars, conducting teaching observation activities, and providing enterprise practice opportunities can facilitate teachers' professional

development.

Industry enterprises, as both significant participants in industry-education integration and valuable resources for course construction, should be invited to participate in course design and teaching, integrating industry standards and actual demands into the course content. Through school-enterprise cooperation and the integration of industry, academia, and research, a close alignment between course content and industry needs is achieved. In the "Introduction to Social Security" course, Liaoning University of International Business and Economics has established partnerships with multiple enterprises, jointly developing course content and practical projects, thereby providing students with abundant practical opportunities.

6. Conclusion

The practice of cross-institutional credit accrual, as an emerging pedagogical model, is currently in its exploratory phase. However, due to its inherent flexibility, complementarity, and autonomy, this model holds profound significance and vast potential for the cultivation of innovative talents. It transcends the barriers to cross-campus exchange and collaboration among faculty members, thereby establishing a foundation for inter-institutional cooperation. Consequently, expanding the scale of cross-institutional credit courses, continually refining the curriculum system, and striving to create exceptional courses will greatly facilitate the personalized development of students while propelling the realization of innovative talent cultivation models.

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