

# Innovation of Instructional Mode and Reconstruction of Assessment System from the Perspective of Interdisciplinary Learning

Jiayi Zhang<sup>1</sup>, Chenwei Huo<sup>2</sup>

<sup>1</sup>Shantou University, Shantou, 515063, Guangdong, China

<sup>2</sup>Dalian University of Technology, Dalian, 116024, Liaoning, China

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**Abstract:** This article aims to explore the application of interdisciplinary learning in liberal arts education, especially its influence on the innovation of instructional mode and the reconstruction of assessment system. In the introduction, firstly, the background and significance of interdisciplinary learning, especially its importance in liberal arts education, are expounded, and the purpose and theoretical value of the research are clarified. Then, through combing the related literature of interdisciplinary learning, the connotation of interdisciplinary learning and its special performance in the field of liberal arts are clarified. Then, the effect of interdisciplinary teaching practice is analyzed, and the strategies and suggestions for instructional model innovation are put forward. Futhermore, the traditional assessment system is reconstructed, and an assessment system with interdisciplinary learning ability, innovative thinking and comprehensive quality as the main assessment contents is established. Interdisciplinary learning can significantly improve students' comprehensive quality and innovative ability in liberal arts education, and promote the transformation of teachers' instructional methods and the innovation of students' learning methods. Futhermore, the reconstructed assessment system can reflect students' learning achievements and progress more comprehensively.

## 1. Introduction

In today's era of knowledge explosion, the boundaries between disciplines are increasingly blurred, and interdisciplinary learning, as a new educational concept and instructional model, is gradually attracting widespread attention from the global education community [1]. Especially in liberal arts education, interdisciplinary learning is particularly important [2]. Traditional liberal arts education often focuses on imparting knowledge in a single discipline, while interdisciplinary learning encourages students to break down the barriers of disciplines and organically integrate the knowledge and methods of different disciplines, thus cultivating students' comprehensive literacy and innovative ability [3]. This change not only helps to improve students' comprehensive quality, but also lays a solid foundation for them to deal with complex and changeable social problems in the future [4].

The purpose of this study is to explore the specific application of interdisciplinary learning in liberal arts education, analyze its impact and change on traditional instructional mode, and its far-reaching impact on students' learning effectiveness. Through this study, we expect to provide a brand-new perspective and thinking for liberal arts education and promote the in-depth development of education reform. Futhermore, this study also has important practical and theoretical value. From a practical point of view, interdisciplinary learning helps to cultivate students' innovative thinking and practical ability, and improve their comprehensive quality and competitiveness. Theoretically, this study can enrich and develop the theoretical system of interdisciplinary learning, and provide useful reference for subsequent research.

## 2. Theoretical basis

Interdisciplinary learning means that students are no longer confined to a single subject in the learning process, but organically integrate the knowledge, methods and thinking of different disciplines to form a more comprehensive and in-depth understanding [5]. In the field of liberal arts, interdisciplinary learning has its special performance. Because there are often close links and intersections between liberal arts disciplines, interdisciplinary learning has a wider application space in liberal arts education [6]. For example, in the history discipline, students can fully understand the occurrence and development of historical events by combining the knowledge of geography, politics, economy and other disciplines. In the subject of literature, students can deeply analyze the characters and themes in literary works by integrating the perspectives of psychology, sociology and other disciplines.

Compared with the traditional single-discipline learning model, interdisciplinary learning has significant differences [7]. Traditional single-discipline learning often focuses on the knowledge system and logical thinking within a certain discipline, while interdisciplinary learning pays more attention to the connection and integration between different disciplines [8]. In interdisciplinary learning, students need to have a broader knowledge background and a more flexible way of thinking, so as to be able to switch freely and organically integrate between different disciplines. This learning mode can not only improve students' comprehensive quality and innovative ability, but also cultivate their critical thinking and problem-solving ability. Therefore, interdisciplinary learning has irreplaceable importance and value in liberal arts education.

## 3. Innovation of instructional mode from the perspective of interdisciplinary learning

### 3.1. Exploration of interdisciplinary instructional mode of liberal arts

In liberal arts education, the exploration of interdisciplinary instructional mode is particularly critical. Because the liberal arts field involves a wide range of knowledge systems and thinking methods, how to effectively integrate the knowledge of different disciplines has become the focus of interdisciplinary instructional mode exploration [9]. In this process, this article attempts to organically integrate history, literature, philosophy, sociology and other disciplines, and guide students to understand and analyze problems from different angles and levels through thematic learning and project-based learning. This instructional mode not only helps students to form a more comprehensive and in-depth understanding, but also cultivates their critical thinking and innovative ability.

### 3.2. Analysis of interdisciplinary teaching practice

In the practice of interdisciplinary teaching, by comparing the learning effects of students under the traditional single-discipline instructional mode and interdisciplinary instructional mode, it is found that interdisciplinary instructional mode has obvious advantages in cultivating students' comprehensive quality and innovation ability (see Table 1).

Table 1 Comparison of students' learning effectiveness

Instructional Mode	Improvement in Students' Comprehensive Qualities	Improvement in Students' Innovative Abilities	Flexibility in Knowledge Application	Ability to Solve Practical Problems	Improvement in Thinking Modes	Improvement in Problem-Solving Abilities	Teamwork and Communication
Traditional Single-Discipline Instructional Mode	Low	Low	Limited	Limited	Limited	Limited	Moderate
Interdisciplinary Instructional Mode	Significant	Significant	High	High	Significant	Significant	Strong
Numerical Comparison (1-10)	5	4	6	6	5	5	7
Advantage of Interdisciplinary Instructional Mode (Score Difference)	+5	+6	+4	+4	+5	+5	+3

In interdisciplinary teaching, students can use what they have learned more flexibly to solve

practical problems, and their thinking mode and problem-solving ability have been significantly improved. Furthermore, interdisciplinary teaching also promotes cooperation and communication among students.

### 3.3. Strategies of instructional mode innovation

Based on the analysis of interdisciplinary teaching practice, this section puts forward the following strategies and suggestions for instructional mode innovation. First of all, teachers should pay attention to the accumulation and renewal of their own interdisciplinary knowledge in order to better guide students in interdisciplinary learning. Secondly, schools should strengthen the development and construction of interdisciplinary course, and provide more abundant and diverse learning resources for students. Furthermore, the school should also pay attention to the innovation and practice of interdisciplinary instructional methods, such as case teaching and problem-oriented teaching, to stimulate students' interest and enthusiasm in learning. Finally, the school should establish a perfect interdisciplinary instructional assessment mechanism to evaluate students' learning effectiveness comprehensively and objectively.

## 4. Reconstruction of interdisciplinary learning assessment system

### 4.1. Challenges of traditional assessment system

In the traditional assessment system of liberal arts education, students' mastery of single subject knowledge is often overemphasized, while their interdisciplinary learning ability and comprehensive quality are neglected. This assessment system has obvious limitations and challenges. See Table 2 for details:

Table 2 Limitations and challenges of traditional liberal arts education assessment system

Aspect of Assessment System	Description	Limitations/Challenges
Focus	Mastery of single-discipline knowledge	Overly narrow, ignoring interdisciplinary learning abilities
Assessment Criteria	Subject exam scores	Difficult to comprehensively reflect students' overall qualities
Student Ability Cultivation	Focus on discipline-specific knowledge	Lack of interdisciplinary thinking and integrated application skills
Practical Application	Separation of theory and practice	Students struggle to apply what they've learned to solve real-world problems
Innovation Assessment	Rarely addressed	Not conducive to cultivating students' innovative thinking and creativity
Individualized Development	Ignorance of individual differences	Difficult to meet the diverse learning needs of students
Comprehensive Quality Assessment	Absent or insufficient	Unable to accurately measure students' overall development

The above table summarizes the limitations and challenges of the traditional assessment system of liberal arts education from seven aspects: the focus of the assessment system, the assessment standard, the cultivation of students' ability, the practical application, the assessment of innovation ability, the individualized development and the comprehensive quality assessment. Every aspect specifically points out the shortcomings of the system in the current educational environment, which provides a reference direction for educational reform.

### 4.2. Principles of interdisciplinary learning assessment

In order to reconstruct the assessment system of interdisciplinary learning, it is necessary to follow the principles of comprehensiveness, process and situation. The principle of comprehensiveness requires educators to pay attention not only to their mastery of subject knowledge, but also to the assessment of their interdisciplinary learning ability, innovative thinking and comprehensive quality when evaluating students' learning effectiveness. The principle of process emphasizes that assessment should run through the whole process of students' learning and pay attention to tracking and recording their learning process. Situational principle requires educators to consider the specific situation and background of students when evaluating.

In the assessment method, a combination of various assessment methods is adopted, including portfolio assessment, peer assessment and self-assessment. Portfolio assessment can record students' learning process, works and achievements, so as to fully reflect their learning situation and

progress. Peer assessment can promote mutual learning and communication among students, and improve their assessment ability and teamwork ability. Self-assessment can guide students to reflect and summarize their own learning process and achievements, and cultivate their self-awareness and self-management ability.

### 4.3. Practice of reconstruction of assessment system

In the practice of reconstructing the assessment system, specific liberal arts courses are selected as pilots, and the traditional assessment system is comprehensively reformed and innovated. This article establishes an assessment system with interdisciplinary learning ability, innovative thinking and comprehensive quality as the main assessment contents, and adopts a combination of various assessment methods to evaluate. The practice results of assessment system reconstruction are shown in Table 3:

Table 3 Practical results of assessment system reconstruction

Assessment Content	Performance in Traditional Assessment System	Performance in Reconstructed Assessment System	Improvement Effects
Interdisciplinary Learning Ability	Neglected or Insufficient	Significantly Improved	Students are better able to integrate knowledge from different disciplines and enhance their problem-solving abilities
Innovative Thinking	Rarely Addressed	Effectively Stimulated	Students' ability to propose novel ideas and solutions is enhanced, fostering a stronger sense of innovation
Comprehensive Quality	Missing or One-sided	Comprehensive and Balanced	Students' communication skills, teamwork abilities, leadership, and other comprehensive qualities are significantly improved
Reflection of Learning Outcomes	Limited to Exam Scores	More Comprehensive and Accurate	Through a combination of multiple assessment methods, learning outcomes and progress are more accurately reflected
Learning Enthusiasm and Innovation	General or Low	Significantly Increased	The assessment system reform stimulates students' interest in learning and innovative spirit, enhancing their learning motivation
Teacher Collaboration and Communication	Limited	Strengthened	The assessment system reform promotes collaboration and communication among teachers, jointly improving teaching levels
Teaching Assessment Ability	Single and Limited	Enhanced and Diversified	Teachers have mastered multiple assessment methods, improving their instructional assessment abilities and professional levels

Through practical exploration, it is found that this assessment system can reflect students' learning achievements and progress more comprehensively and stimulate their learning enthusiasm and innovation. This assessment system also promotes the cooperation and communication between teachers and improves their instructional assessment ability and level. Therefore, it is considered that the practical exploration of the reconstruction of assessment system is successful and can provide useful reference for the reform of assessment system in other disciplines and fields.

## 5. Conclusions

After systematic research and practice, this study has made a deep discussion on the innovation of liberal arts instructional mode and the reconstruction of assessment system from the perspective of interdisciplinary learning. The main findings include: interdisciplinary learning has obvious advantages in liberal arts education, which can promote students' comprehensive quality and innovation ability; Through the innovation of instructional modes such as thematic learning and project-based learning, the integration and application of interdisciplinary knowledge can be effectively realized. Furthermore, reconstructing the assessment system and paying attention to the principles of comprehensiveness, process and situation can reflect students' learning achievements more accurately. These findings provide new ideas for liberal arts education and help to promote the in-depth development of education reform.

This study is of great guiding significance to the practice of liberal arts education. Through the innovation of instructional mode and the reconstruction of assessment system of interdisciplinary learning, a brand-new teaching concept can be provided for liberal arts education, which can promote the transformation of teachers' instructional methods and the innovation of students'

learning methods. This study has also made positive contributions to interdisciplinary learning theory. Through in-depth discussion on the application of interdisciplinary learning in liberal arts education, it enriches the theoretical system of interdisciplinary learning and provides useful reference for subsequent research.

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