Reform and Practice on the Internationalization of General Education Based on Hall's Three-Dimensional Structure

—A Case Study of the Course Reading China from an International Perspective

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Abstract—**This paper combines Hall's three-dimensional model with the teaching system of the course Reading China from an international perspective, systematically analyzes the logical relations among teaching progress, teaching ideas and teaching methods from the time dimension, logic dimension and knowledge dimension, and constructs the curriculum structure of the course. As one of the main forms of higher education internationalization, course internationalization has been given prominence in the recent decade, especially in general education courses. Under the concept of internationalization of general education, this paper proposes the plans and measures to the reform of the general education course from the perspective of logic dimension and teaching method, and identifies the crucial factors that affect teaching efficiency in the teaching practice of the general education course.**

Keywords—Hall's three-dimensional structure theory; internationalization of general education; course reform and practice; Reading China from an international perspective

I. INTRODUCTION

The internationalization trend of Chinese university curriculum system is becoming increasingly obvious in the recent decade [1], and as an important part of it, the internationalization of general education curriculum has also become an important path to cultivate students' international quality. The cultivation would not only be located in the improvement of foreign language ability to grasp the latest international knowledge and technology, but also in the global consciousness and international vision. And additionally the ability of international communication should be cemented by enabling students to introduce the outstanding achievements of Chinese traditional culture and the great achievement of the development of the socialism with Chinese characteristics to the globe in a foreign language, namely using the international language to tell good Chinese stories, showing a real and comprehensive image of China, enhancing the national cultural soft power.

In general, there are two ways to realize the internationalization of general education courses [2]: one is to develop new courses focusing on international knowledge; the other is to inject new international dimensions into existing courses. At present, domestic researches on the internationalization of general education mainly focus on the introduction of foreign experience in the construction of general education courses, as well as the reflection on students' international quality, with an apparent disposition to macro theoretical discussion, while the practice researches on the curriculum construction and reform of general education courses in Chinese universities are relatively rare [3]. Drawing on Hall's three-dimensional structure in system engineering theory, this paper takes a general education course, Reading China from an international perspective, as an example, analyzes the teaching system of general education courses, describes and explains the reform and practice of general education curriculum under the background of general education course internationalization.

II. HALL'S THREE-DIMENSIONAL STRUCTURE

As one of the concrete methodology embodiments of system engineering theory proposed by A.D. Hall in 1969, Hall's three-dimensional structure theory designs the basic principles and constructs a practical guiding framework to solve the problems of planning, design, organization and implementation, and specific management of large-scale and complicated systems. In this theory, three dimensions, including logic dimension, time dimension and knowledge dimension, constitute the three-dimensional spatial structure of systems engineering. The logic dimension represents the work content to be carried out in each stage of the complicated system and the thinking procedure within to be followed; the time dimension represents the whole process of system engineering activities from the beginning to the end in chronological order; and the knowledge dimension refers to all kinds of knowledge and skills to be used in the whole process. Hall's three-dimensional structure vividly describes the framework of system engineering research, which can be further expanded to form a hierarchical tree system. This theory originated in engineering project management, industrial quality control and other fields, and has been widely used in complex systems of engineering in many fields.

Teaching activities involve the application and practice of various teaching methods. As the course schedule proceeds, the

shaping of students' ability and the mastery of knowledge are gradually realized. Therefore, the completely teaching process can be regarded as a complex systematic engineering. From the perspective of system engineering theory, combining the course teaching system with Hall's three-dimensional structure is helpful for the planning, design and organization of teaching activities and hence a new platform could be built for the optimization and innovation of course teaching.

III. THE CONSTRUCTION OF THE THREE-DIMENSIONAL STRUCTURE SYSTEM OF THE COURSE

The general education course, Reading China from an international perspective, is designed to improve undergraduate students' foreign language ability, cross-cultural communication ability, international culture communication ability and global awareness, strengthening their international vision, and the understanding of China's growing international influence. Teaching materials contained in this course, including political, economic, cultural and social reports about China, come from various international medium including traditional print medium and newly-developing digital medium. At the same time, the course can also provide students with high-quality and diversified language samples, which will help to improve students' language expression and cultural communication ability of "telling Chinese stories in international languages".

According to the basic principles and model characteristics of Hall's three-dimensional structure, this paper attempts to build a three-dimensional structure system for the course, in combination with the specific characteristics of the general education course, Reading China from an international perspective.

The time dimension represents the dimension of course progress and ability target. In the traditional sense, time dimension refers to the whole process from the beginning to the end. When it comes to course teaching, it can be understood as the completion of class schedule from the beginning hour to the last hour. At the same time, this dimension also includes the achievement of teaching objectives and course goals and the completion of various stages of student ability development; consequently it can be regarded as a progressive arrangement of knowledge structure and goal achievement as course schedule proceeds.

The logic dimension could be regarded as the pedagogical dimension. As the thinking procedure that every single stage of the course needs to follow, the concrete expression of logic dimension in the course is the teaching method. The teaching method dimension includes various teaching methods throughout the course, including lecturing, assessment, flipped classroom, micro class, discussion, project learning, etc.

The knowledge dimension includes the course knowledge structure and the sorting out of different content sections. The main line of the course involves different themes (China's infrastructure, mobile payment in network era, the electric business platform construction, Internet plus industry development, etc.), different media types (traditional paper print media, digital media) and different regions to which the medias belong (European countries, Asian, African and Latin American countries, neighboring countries, countries related to the belt and road).

With the extension of the time dimension, the content of the knowledge dimension is gradually deepened, and the requirements for the cultivation of students' ability are constantly improved. The various teaching methods and means listed in the logic dimension are also gradually enriched. At the beginning of the course, the teaching methods are mainly guided by teachers, while the students focus on cultivating their reading and listening abilities to acquire enough knowledge of current affairs and news. In the middle of the course, students should carry out discussion and then prepare for report based on the knowledge accumulation of the previous input knowledge, which should be associated with the characteristics of their own professional background, so as to improve students' innovative thinking ability. With the extension of time dimension, the teaching activities of high-level knowledge dimension need the support of high-level logic dimension teaching methods. The three dimensions of time dimension (course schedule, ability target), knowledge dimension and logic dimension (teaching method) complement each other and constitute the three-dimensional structure of the whole course.

IV. TEACHING REFORM AND PRACTICE

A. Reform form the logic dimension

Among the teaching methods reflected in the logic dimension of the course, Reading China form an international perspective, discussion learning and project learning are the two reforms and practice methods explored in this paper.

1) Discussion learning

Discussion teaching should be combined with large class teaching and small class discussion. In recent years, the international undergraduate teaching reform results reflect the importance of discussion teaching [4]. Discussion in teaching activities can fully incentivize students' potential in learning, laying a foundation for multi-angle and multi-level cognitive interaction [5]. As a general education course for undergraduates in the whole university, the number of students who choose Reading China from an international perspective is usually more than 100, which still belongs to large class teaching in terms of teaching scale. However, the best soil for discussion teaching is small classes. Therefore, it is necessary to adopt the method of "large class teaching, small class discussion and large class presentation" to conduct personalized discussion and guidance according to the different needs of students with different professional backgrounds and interests. In general education, Harvard sets small classes of seminars for 15 students, and Princeton has a special seminar for small number of students [6]. Both cases are textbook examples in general education. Therefore, in order to improve the quality of undergraduate general education, on the premise of providing equal educational opportunities for all students, the small-class discussion model is indeed an effective way to make up for the shortage of large-class teaching. At the same time, many studies have demonstrated that small-class seminars can highlight students' subjectivity in learning, stimulate their active learning awareness, enhance their learning input, cultivate their innovative awareness, and exercise their language skills. This is especially important for

cultivating students' international ability. In other words, the model of large class teaching and small class discussion is completely in line with the requirements and objectives of internationalization of general education.

2) Project learning

An important purpose of the internationalization of general education courses is to broaden students' international vision, cultivate their international awareness, and train their ability to use language skills and professional knowledge to participate in solving international problems [8]& [9]. The realization of those goals can be achieved through project-based teaching. Teachers inform students of the goals and tasks of teaching projects and the scope of knowledge and skills needed to complete specific tasks, so that students can exert their subjective initiative and complete project tasks in groups. Then students are asked to display project results and evaluate their own learning. The implementation of the teaching target of the project is based on students' choice of the theme, in which teachers conduct personnel grouping, task allocation, knowledge introduction, content guidance and process control.

In the course of Reading China from an international perspective, students from different major backgrounds would be divided into groups to conduct small class discussion, and the research results can be used as a project to further deepen the learning effect. For example, students are supposed to discuss the topic of UN peacekeeping forces' funding allocation in small classes at the beginning, and then form project groups spontaneously according to different research results to carry out project research, for which the results can be in the form of reports or papers. Project-based teaching could maximize the internationalization ability of students, and at the same time link different professional backgrounds of students with the handling of practical problems, so as to realize the internationalization of general education courses from multiple levels while training students' scientific research ability [10].

B. Reform form the knowledge dimension

The content of this course involves a lot of media coverage, so the use of fixed textbooks can't meet the needs of teaching. One of the requirements of internationalization of general education is that students can get access to first-hand international news and information, which requires the use of online reading to expand teaching materials.

The use of online reading can provide a large number of vivid foreign language reading materials for the course, and on this basis, strengthen students' language application ability, broaden their international vision and enrich their international knowledge. However, compared with the traditional reading mode, the network reading reform needs to change students' reading habits and learning roles. Online reading requires students to choose reading materials actively. In traditional textbook reading, the reading materials are fixed and students have fewer choices. In the online reading mode, students need to spontaneously find reading materials from online media according to the theme presented in the course. Students no longer rely heavily on teachers and textbooks, but become active builders of knowledge.

C. Crucial factors to improve teaching efficiency

In the process of teaching, lecturers will conduct interviews with students randomly to explore the factors affecting students' learning effect. Based on the interviews to students in the class, this paper identifies three crucial factors that affect the teaching efficiency and the cultivation of international ability, namely (1) students' interest in a specific topic, (2) the rules and forms of discussion and project-based learning, and (3) the composition of members form different disciplinary backgrounds.

1) Students' interest in the topic

Whether students are interested in the topic of discussion or not largely determine the enthusiasm of students to participate in discussion learning and project learning, and affect the initiative of students to read online. The interview results showed that many students could favor the current popular international news topics, while the old news topics would reduce students' interest. At the same time, students' interests are closely related to their major backgrounds.

2) The rules and forms of discussion and project-based learning

According to the interview results, the majorities of students prefers to participate in discussions organized by lecturers rather than teaching assistants, and are likely to participate in offline discussions rather than online discussions. Online discussions and project learning tend to be inefficient and less engaged.

3) Project teams should be composed of students from different major backgrounds

In discussion learning, team members are composed of students from different major backgrounds. It can maximize the integration of different major backgrounds and subject knowledge in specific project learning, open up and inspire new ideas. However, in the teaching practice, lecturers find that, limited by interpersonal relationships, students in the general education class tend to form teams with students of the same major, rather than cross-majors.

D. Teaching practice

On the basis of identifying the crucial factors to improve the teaching efficiency and learning effect, and carrying out the reform of the logic dimension and the knowledge dimension of the course, Reading China from an international perspective, the following teaching practices have been carried out. This course has realized the diversification of teaching methods and teaching materials. In terms of teaching methods, discussion learning and project learning are introduced into the course system in order to encourage students to give full play to their creativity, providing a platform and opportunity for students to exercise their language skills and discuss international issues. In terms of teaching materials, this course carefully selects news topics that are popular with students, and adds the task of online reading for students, so as to cultivate students' ability of independent study, independent reading and independent access to information. In addition, in the process of organizing students' discussion, this course encourages students to form teams across different majors, so as to inspire each other by their respective horizons and ideas.

V. CONCLUSION

With the deepening of the internationalization of modern education, the general education course is bound to face the reform of teaching content and teaching method. In this paper, based on Hall's three-dimensional structure model, the curriculum optimization reform system is established from three dimensions of time dimension, logic dimension and knowledge dimension. According to the teaching practice and students' feedback, the reform of logic dimension and teaching method better promotes the improvement of students' international vision and international language ability, and proves that discussion teaching, project teaching and the integration of online reading are effective reform methods of course teaching optimization. Besides, three crucial factors that affect the teaching efficiency are identified in this research: (1) students' interest in a certain topic, (2) the rules and forms of discussion and project-based learning, and (3) the composition of members from different disciplinary backgrounds.

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