Research on the Development Method of Interdisciplinary Curriculum

Jianwei He, Li Zhao, Jing Luo, and Mu Zhang

Abstract—Interdisciplinary education and cultivation of compound talents play important roles in modern education reforms. However, interdisciplinary education is still at its early stages of development in China as little researches have been made in interdisciplinary curriculum theory. By analyzing western curriculum theories and applications, the paper attempts to establish an appropriate system of curriculum development method on interdisciplinary education of China. Moreover, the course of tourism E-marketing is taken as an example to discuss the specific procedures of the method to offer reference for interdisciplinary curriculum design in China.

Index Terms—Interdisciplinary curricula, curriculum development method, tourism E-marketing.

I. INTRODUCTION

The curriculum originates from curriculum thoughts of Plato and Aristotle in Greece. The publication of the book The Curriculum by E. Bobbit symbolizes its start as an independent academic field. In 1949, Ralph Tyler published the book of The Basic Principle of Curriculum and Teaching which raised four basic curriculum questions: “What education target does school want to achieve?” “What education experience can help to achieve this target?”, “How do we effectively organize these education experiences?” “How can we reach these objectives?”[1] This viewpoint has become the most profound theory framework in the field of modern curriculum research, and “Tyler Principle” is seen as the “dominant model of curriculum study”. The middle of 20th century witnesses an active growth in curriculum reform movement, and there are three schools in research of curriculum theory (See Table 1). 

TABLE I. THE GIST OF VARIOUS SCHOOLS ON CURRICULUM THEORY

<table>
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<tr>
<th>Theoretical school</th>
<th>Main point</th>
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<td>Subject structure curriculum theory</td>
<td>It takes the most academic knowledge in human culture as curriculum content with emphasizing logic program, inner connection and structure of knowledge system itself. What’s more, it chooses academic nature as the basic form of curriculum to teach students how to learn by mastering subject structure.</td>
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<tr>
<td>Social reform curriculum theory</td>
<td>It pays less attention on knowledge system, instead, its core point is to organize curriculum with modern significant social issues rather than helping students adapt to the society. Only in this way can assist students to participate and make social planning to support social movement.</td>
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<tr>
<td>Student-centered curriculum theory</td>
<td>It prefers to construct curriculum based on students’ interests and preference, motives and preference, capacity and attitude etc. What’s more, curriculum should be student-oriented, and its content should change for various students. Moreover, students should participate the process of curriculum design, implementation and evaluation.</td>
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II. LITERATURE REVIEW ON CURRICULUM THEORY DESIGN AND APPLICATION

Most curriculum development of Chinese universities have adopted Tyler’s target model, and the choice of curriculum target mainly bases on subject requirement and social demand. An administrative department of education is responsible for making education scheme and objectives. This target model benefits for mastering inner logics of subjects, and is enhancing technicality of subjects, training specialized talents. On the contrary, this is too much limited by subjects who lead to knowledge structural imbalance and less adaptability of learner [2]. Now curriculum constructions pay more attention to the development of elementary subject, common course education and interdisciplinary education in Chinese university. For example, Peking University launched a scheme named “Yuan Pei” project based on viewpoint of general education, Zhejiang University started new curriculum system composed of general, elementary and specialized courses [3], Shanghai Jiaotong University broke through traditional major boundary to practice the teaching in modular knowledge structure.

There are diversified curriculum development models and methods abroad, besides referring to certain essence of target model. For instance, in Japanese university, “subject supervisor” and “specialized supervisor” are in charge of curriculum development. British government starts “experiment of enterprise spirit in higher education” and Royal arts association carries out the campaign of “higher education for capacity” to strengthen the connection between curriculum and work [4]. While American university insists in cultivating students’ personality, allowing students propose non-existing subject tailoring their own needs and special major diplomacy can be offered [5]. American university believes that knowledge is universal-connected principle, so they encourage students’ interdisciplinary learning in the form of “synthetic core course”, its aim is to train students’ basic skill, critical thinking, creative thinking, problem-solving and art.

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performance capacity etc. We can also learn something from American teaching methods, because it recommends research-based learning, it sets up human-oriented learning community with adopting teaching methods such as collaborative learning and group work etc. to help students have active learning and practice in internship and research project.

More countries have made marvelous accomplishment in interdisciplinary research [5], there is an obvious synthetically and interdisciplinary tendency in curriculum reform. Chinese interdisciplinary education research is still at the beginning stage without systematic interdisciplinary system.

III. THEORY AND PRACTICE OF INTERDISCIPLINARY CURRICULUM DEVELOPMENT

A. Exploration on Tourism-management-oriented Interdisciplinary Development Method

Founded in 1993, Shenzhen Tourism College of Jinan University was unique with early establishment, new teaching model and comprehensive training level. And in 2001, it became the first tourism college that had successfully got UNWTO TedQual Certificate from UNWTO in China. What’s more, major of tourism management is the only famous specialty in Guangdong province.

1) Current situation of curriculum system

Shenzhen Tourism College bases on major of tourism management, supported by Business English and eCommerce. It concerns integration among subjects with advocating triple-linguistic teaching (language of Chinese, English and computer) and three-term system(summer holiday is an internship term).Locating in Overseas China Town, it is very convenient for cooperation among enterprise, college and research organization. Its aim is to nurture applied talents with innovation spirit. The curriculum system of three major subjects are made of common education courses, elementary compulsory courses, elementary elective courses, specialized compulsory courses and specialized elective courses.

2) Method of Interdisciplinary Curriculum Development

Based on the characteristic and demand of interdisciplinary curriculum, the authors summarized a development thought for interdisciplinary curriculum basing on target module (see Fig. 1.).

The establishment of curriculum target is achieved by the means of “demand evaluation”. That is, on collecting educational demand from professionals, teaching staff, students, various organizations and communities, curriculum will be closely analyzed and judged in the aspects of students, society and subjects, then people will spot out the contradiction between educational demand and current situation of students’ behavior and attitude so as to construct curriculum.

- Organization and Selection in curriculum content

First, the elementary principle of management and relevant subjects should be set up. It is guided by behaviour target. Second, it will choose theme course content closely connected with real social life, and it needs increases students’ capability and creative practice. Students can learn a lot in practice, in other words, it is guided by expression target. It concerns more on students’ capacity on understanding and innovation. And the creative, open, tolerant learning space is positive for students’ growth. Finally, it will take advantage of education and subject’s strength to cooperate with strong partner to establish dominant interdisciplinary subjects to nurture talents with specific direction.

- Curriculum Evaluation

The option on evaluation model: It adopts Tyler’s “target evaluation model” and R.E.Stake’s “Response Evaluation Model” with selecting their strengths.

Evaluation program design: Valuators invite the opinions from various participants to set evaluation range; Valuator has field observation to compare the predetermined target with the real outcome.; Valuator will modify the responding issues theoretically and work out the evaluation scheme; Valuator will search relevant information and then process and classify the problems that need response; Valuator will write the classified evaluation result in a formal report and therefore make comprehensive judgment.

B. Practice of Curriculum Development on Tourism eCommerce Course

The authors choose Tourism eCommerce as Demonstration course to exploit the practice problems about the interdisciplinary curriculum development.

Cross merging of subject knowledge in Tourism eCommerce As an interdisciplinary course mixing tourism, marketing and computer knowledge, Tourism eCommerce is a market-oriented subject produced in the background of fast development of IT and tourism demand. While eCommerce is a new marketing approach worked out to cope with IT era from tradition marketing subject, it is also the important part for efficient development of eCommerce. Subjects of tourism, marketing and computer have shared knowledge which is accessible for interdisciplinary knowledge integration (See Fig. 2.)

![Fig. 1. Development method of interdisciplinary curriculum.](image1)

![Fig. 2. Subject coverage and knowledge relevance.](image2)
Tourism eMarketing aims to try the application of eMarketing principle in tourism, discuss special demand and operational strategy of eMarketing in tourism so as to promote the reform and improvement of eMarketing and tourism knowledge system by their interaction to achieve modernized transformation of tourism sector. 

- Curriculum development and evaluation of Tourism eMarketing

At present, there are few interdisciplinary curriculums opened for teaching in the background of Tourism eMarketing, and much less for the research on its development.

Now eMarketing research in China is still at early stage, most eMarketing courses open in universities and management-oriented colleges and technical schools. They are regarded as the core courses in specialism of eCommerce and marketing. There are two types in its content, technical practice and theoretical management. The former aims at technology and put the tool and method of eMarketing as the core content, the latter is more theoretical for it designs the content of curriculum according to marketing theory. Because the development of various relevant courses are immature, there are some defects in curriculum and teaching, for example, the immethodical curriculum target, incomplete textbook content, simple practice curriculum content, single evaluation approach, failing in meeting market demand etc. All these problems need to be improved in development of Tourism eMarketing course.

There designs marketing and tourism eCommerce as elective courses in the major of tourism management and eCommerce in Shenzhen Tourism college. Therefore, the authors hope to further strengthen the advantages of tourism management and eCommerce to open the course of tourism eMarketing to deeply guide students’ practical learning.

The course of Tourism eMarketing is an elective course for major of tourism management and eCommerce. It will collect the opinions from relevant enterprises, school management, teachers and students to decide course target by the means of demand evaluation. As tourism network market is defined as management-oriented application course which focuses on basic knowledge on tourism and marketing theory, behaviour target should be easy to evaluate. What’s more, owing to its interdisciplinary and application features, it organizes society-oriented thematic exploration and practice activity. Meanwhile, setting so open target allows teachers decide the procedure of open curriculum according to students’ experience and comprehension capacity, and they can pay more attention to the ability of innovation and problem-solving in practice teaching.

Course’s main content is designed for application demand of Tourism eMarketing which includes marketing principle and tourism, tool and method of eMarketing and eCommerce operation and strategy etc. That is, it means to foster the management staff in tourism network strategy instead of technicians. Specifically speaking, the teachers ranging from the specialism of tourism, eMarketing, management and marketing are responsible for teaching and making curriculum. Elementary theoretical theory is taught by eMarketing and tourism teachers, and the major part of curriculum is made up of thematic lecture, seminar, experimental practice and group work etc. It will also invite scholars and entrepreneur to have a lecture, or arrange group practice in network lab or out of school periodically. What’s more, students can participate in teacher’s project. This curriculum system can achieve the integration of inner relation among various subjects by application. It pays attention to objective and domestic evaluation of curriculum, therefore, more people rather than only the ones in the school can join in this evaluation to form a balanced evaluation index including teaching staff, enterprise and student to continuously improve curriculum so as to achieve the research and development of Tourism eMarketing subject.

IV. CONCLUSION

Development and research of interdisciplinary curriculum is the common demand for social development and talent cultivation, and it is also one of the key points for world’s education reform. Development method of interdisciplinary curriculum plays the role of significant precondition for development model, belief and its teaching improvement as well. Owning to systematic, innovative, research and regular feature, interdisciplinary curriculum requires its target-setting focusing on learner’s elementary knowledge study and flexible application capacity. Hence, the authors intend to base on traditional target model, taking other model and belief as supplementary to exploit interdisciplinary curriculum which focus on both principle and application innovation. Meanwhile, it works on practice model research in interdisciplinary curriculum of tourism eMarketing with taking Shenzhen Tourism College as an example to improve interdisciplinary and comprehensive talents training.

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REFERENCES


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