A discussion of cultivating undergraduate talents of tourism management based on the CDIO mode

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ABSTRACT

This paper, based on the “knowledge, ability and quality”, establishes knowledge integration modular curriculum system. For the first time in Henan Province, this paper creates a professional ability standard module for tourism management, establishes the diversified teaching method which possesses the characteristics of teaching process integration. To enhance the learning assessment method of students' self-learning ability, and to explore the effectiveness of the change of teacher’s role from the perspective of improving teachers' ability of CDIO, it will be beneficial to improve the quality of tourism management.

Keywords: CDIO, Tourism Management, Curriculum System, Teaching Method

INTRODUCTION

Today in economic globalization, the development of industry puts forward higher requirements for talents cultivation. In response to social needs, in the Massachusetts institute of technology and the Swedish royal institute of technology, many colleges and universities carried out the study of education reform, and created the CDIO engineering education mode. CDIO is the abbreviation of four words such as Conceive (idea), Design (Design), Implement (implementation) and Operate (operation) which represents the whole process in which modern industrial products developed from conception, research and development to the end of the waste of life. CDIO engineering education mode is the carrier of product creation and the whole process of production, consumption, guiding students to active practices of organic connection between curriculum way of cultivating students' engineering ability. This ability includes not only the students' professional knowledge, but also personal lifelong learning ability, team communication ability and system control. CDIO sets twelve criterions around the system's ability to cultivate comprehensive implementation guide (including cultivation program, teaching methods, teachers, students, learning environment, etc.) as well as the implementation process and the check of the result. Including CDIO relevance principle, the results of the CDIO teaching objectives, curriculum integration, engineering survey, design, production experience, work environment, integration of CDIO, active learning, teachers' ability of CDIO teaching process, teachers' teaching ability, students CDIO ability evaluation, CDIO project evaluation. Among which, the part of the standard has important reference value for non-engineering major talent cultivating.

MATCH THE CDIO STANDARD

The introduction of CDIO teaching mode of industrial design specialty teaching is required to be consistent with the full implementation and the test evaluation standard of CDIO. It is feasible to choose the proper point to combine with the educational methods. 1) The integration of teaching plan: the personal ability, the communicative ability in relationship and products and the establishing ability towards products, process and system must be reflected in the teaching program. In the teaching program, the inter-support among subjects must be taken into consideration. Besides, the cultivation of personal ability, interrelationship as well as the establishing ability towards products, process and system must be integrated into the subjects. 2) Design- Experience. Curriculum implementation plan
must include two or more than two designs. The first is the basic level of experience; the second is the advanced experience. Create various kinds of opportunities to make the students participate in the products, systematic thinking, designing, implementation and operations etc. In the previous period, some simple understandable products and systems are provided. But in the later period, a difficult and complex system design — implementation experience are rendered. It is beneficial for the students to put what they have learnt in class into practice, thus enhancing the comprehensive ability.

The engineering practice venue
CDIO teaching model aims at increasing the opportunity of students' participation in practice. For industrial design professional, the professional design software, all kinds of research experiment platform and participation in the project design practice opportunities are fully utilized to form the construction of knowledge, ability and attitude values. The design practice place, as the design of the hardware conditions, should revolve the students in order to benefit for the collision of the design of communication and thinking.

EXPAND THE CDIO CULTIVATING FACTORS
In the process of concrete operation of CDIO teaching mode, it is a must to take action practically and the continuous adjustment is also inevitable, including the perfection towards the specific characteristics and teaching requirements, enriching and expanding cultivating factors. The professional education is, in essence, is the process which advances with the development of area. In September 1998, Australian industrial design advisory committee at the university of Canberra industrial design pointed out: The industrial design graduates should have a number of skills, as shown in Table one. It is easy to conclude that with the development of Industrial design disciplines, the requirements on skills also change accordingly. Today's industrial designers need to have the ability to communicate with people, design, project management skills, professional knowledge integration capability and resource operation consciousness, etc. These have not been fully emphasized or presented. Therefore, the CDIO mode adjustment should according to their professional development and educational reality. Based on school characteristics, Chengdu neusoft institute and Dalianneusoft institute of information have put forward TOPCARES - CDIO curriculum reform measures. This is the extension on the basis of basic CDIO educational elements which makes CDIO combine with teaching practice process fully, thus having a better educational effect.

THE STRUCTURE OF CDIO
For industrial design professional, the outline of CDIO, which deduces from pure Engineering education development, is unable to cover all aspects of China's industrial design professional education. On the one hand, industrial design is a typical applied discipline. Its application determines the resolution must be based on the practical problems in the enterprise. On the other hand, Industrial design is a typical cross discipline. Therefore, the mode of CDIO, which is based on the exploration on engineering education, has not involved too much industrial design professional, including some humanities classes and artistic aspects of the ability of training objectives. Though the new standards of CDIO are wider than that of the old one and more beneficial for the improvement of quality, it is still a must to expand the adjustment in order to better conform to the professional characteristics of industrial design and provide a more comprehensive foundation for the cultivation of the industrial designer and systematic development. According to the development requirements of the foregoing and professional characteristics, the original target which has not been covered by CDIO can be integrated to build a suitable for industrial design professional education in the new training mode, namely the expansive H A R P (humanism, art, responsibility, professionalism) which has been called CDIO. Based on the existing outline of CDIO, CDIO has adopted humanistic spirit, artistic accomplishment and design concept of responsibility and professional development.

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<th>Tab.1 Expansion effect of HARP for CDIO teaching Programme of industrial design</th>
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<td>General engineering education</td>
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<tr>
<td>Communicative skills</td>
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<td>Technical knowledge and reasoning</td>
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<td>Personal professional skills and professional ethics</td>
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<td>Enterprise and social conception, design, implementation and operation (CDIO) system</td>
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KNOWLEDGE INTEGRATION
The comprehensive and CDIO ability - oriented training mode of tourism, require students to have broad knowledge base. Therefore, school students focus on the wide scope of general education, define the course and the relationship
between the knowledge, ability and quality training, establish a more scientific Professional course knowledge system. We fully grasp the professional tourism management discipline convergence characteristics, with the economic, cultural, social, ecological and other discipline intersection at the same time, focusing on the background of the global digital tourism rapid development, play to our information technology subject characteristics, focus on training students in the informationization of tourism, scenic area management and digital service integration knowledge advantage, promote students in the whole process of tourism activities, manage tourism in the whole process and whole tourism industry chain information technology application ability.

Course of modularity
According to the CDIO cultivating concept, our school determines the hotel industry, tourism industry, tourism scenic area and exhibition industry of the four major industries according to Henan and transformation and upgrading of China's tourism development stage of the talent demand changes, and a "knowledge, ability, quality" with coordinate developmental modular curriculum system was build according to the four types of industry in college graduates Knowledge, ability and quality requirements.

Practice systematism
Practice teaching is the main ways for student to obtain knowledge, cultivate ability, and improve quality. In the process of practice, our school in accordance with the "introduction to cognitive-based application, comprehensive application, innovation" build up "four period of cascade type" practice teaching system. And the research puts forward the framework of the comprehensive experimental teaching system of administration.

CONCLUSION
CDIO education idea is feasible in the non-engineering professional talent training model of education. Promoting the teaching reform of tourism management by using CDIO standards that will not only realize the coordination of students' knowledge, ability and quality cultivation, but also promote the integration of curriculum integration and teaching process, strengthen students' autonomous learning ability, arouse the enthusiasm of teachers in teaching reform.

REFERENCES