

On Teaching of BA Design Based on “Mass Higher Education”

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Abstract—“Mass of higher education” is a quantitative and qualitative mutual unified concept. Volume growth, referring to the enrollment rate of school-age youth colleges and universities to reach 15% – 50%. Qualitative changes include expanding educational philosophy of change, educational functions, training objectives and diverse educational models, curriculum, teaching methods and methods of a series of changes, admission requirements, management practices and the relationship between higher education and society, and so on. This article attempts to undergraduate teaching and research based on our design disciplines “ Mass of higher education” in the background, In considering the design category of employment and comprehensive development of students in respect to the current market as well as the design of a large teaching framework premise, proposed a “limited design professional boundaries blur”, “multi-skill”, “relevant pluralistic,” “market-oriented” teaching structure design improvement ideas.

Keywords—*Design teaching; General education; Mass of higher education*

I. MASS OF HIGHER EDUCATION

According to the American scholar Martin • Taro study, if the gross enrollment rate index, the higher the development process can be divided into “elite stage, the mass stage and popularity phase” three stages. The gross enrollment rate in higher education are 15% less elite education, 15% -50% for the mass of higher education, more than 50% of higher education popularity stage. “Mass of higher education” is a quantitative and qualitative mutual unified concept. Volume growth, referring to the enrollment rate of school-age youth colleges and universities to reach 15% – 50%. Qualitative changes include expanding educational philosophy of change, educational functions, training objectives and diverse educational models, curriculum, teaching methods and methods of a series of changes, admission requirements, management practices and the relationship between higher education and society, and so on.

II. CURRENTLY CHINA'S HIGHER EDUCATION BACKGROUND

If we study undergraduate teaching background design on the big development process to compare higher education,

¹ Note: The gross enrollment rate is then accounted for all types of higher education students 18-22 years of age population ratios.

research professional issues maybe we will be more clearly. Based on the above criteria for the classification and the American scholar Martin • Taro, and according to “China Education Statistical Yearbook” data, in 2002, China's gross enrollment ratio of 15% to break into the “Mass of Higher Education”; According to “China Education Statistical Yearbook” 2010 2data, the gross enrollment rate of China's Beijing, Shanghai, Tianjin, more than 60%, reaching 45% in Zhejiang, Jiangsu and exceeded 40%. Over Beijing, Tianjin and Shanghai municipalities, higher education has been the first in China to enter the “popularity stage”

Various stages of “elite education”, “mass education” and “popularity education” higher education is characterized by the concept of boundaries, educational function, the relationship between educational content and curriculum, teaching methods and teacher-student, student attendance way educational institutions are a gradual change in a process, comparison of the three stages of a variety of content (Table.I. at the end of paper).³

III. PRESENT STATE OF CHINA'S HIGHER EDUCATION DESIGN

At present, the design is basically a professional undergraduate teaching faculty, professional clear division, “single structure”, do not cross. In addition to the basic course of a year, until after graduation to enter the second grade, highly specialized professional curriculum. “Common standard, height uniformity, similarity”, “Highly structured and specialized (compulsory system, the credit system) Such teaching structure, students across the professional learning is basically impossible. It artificially separates the interconnectedness and mutual relations between various professional design; Such a setup is basically a “elite education” era of traditional faculties and professional settings succession and continuity. But, in fact, higher education in China has now entered the “mass stage.” Higher education “mass stage” in view of the characteristics and limits of education, educational features, educational content and curriculum, teaching in the form of the relationship between teachers and students, students studying methods, educational

² China Education Statistical Yearbook [M] // Press People's Education Press, 2011

³<http://baike.baidu.com/link?url=px7>

institutions aspects of various factors, have significantly different from the "elite stage."

IV. STATUS OF FOREIGN HIGHER EDUCATION DESIGN

The basic situation of the design undergraduate teaching abroad is that the two structures "single structure" and "hybrid structure" coexist. The first "single structure" model is Sub-professional school, and from the start of the professional school. Separately in accordance with professional learning, but also from the very beginning professional school separated. "Highly structured and specialized (compulsory system, the credit system)." Implement this teaching structure of the school, usually in professional colleges ranked in front. This school's teaching philosophy is to develop high-end talent industry, requiring specialized, highly structured. They still retain the "elite education" phase characteristics.

The second model is the "hybrid structure." This tutorial presents modular, semi-structured, flexible credit standards diversity, more comprehensive. This model does not emphasize professionalism, various professional courses interspersed module repair enough relevant module, the accumulation of credits required to graduate design graduates can apply. It is a typical "mass of higher education" phase characteristics.

A. Korea

Korean Central University,(Korea ranked first integrated around ten, 2011 Korea University Ranking 9) 4 Undergraduate Teaching of Art Design Institute belongs to the first model. Central University's goal is to achieve university courses and campus internationalization. To achieve this goal, the Central University has signed exchange agreements with more than 70 world-renowned universities in more than 20 countries, expanding the intensity and scope of the international exchange. Central University for the past eight years in a row by the Korean Ministry of Education and assessed as the famous Korean university. The ultimate goal of the Central University is famous the world's top 100 universities ranks in 2018.

Korea Institute of the Arts Faculty of the Central University has five: premiere image creation faculty, faculty of art, design faculty, faculty of music, traditional arts faculty. Among them, the design of the faculty was established in 1957 (the earliest establishment of Korea), a total of five professional: visual design, Industrial design, crafts design, fashion design, interior design. Students from the school will be required of a professional school, until graduation.⁵

B. France

L'ecole de design Nantes Atlantique's design teaching status belongs to the second mode. The College of Design has separately for BAC +2, BAC +3, BAC +5 training courses, the same as well as continuing education courses. BAC +5 in which projects were approved for the state Department of

⁴<http://baike.baidu.com/link?url=l70LTuJQY5JkrkDq0A6mAay5TjAKwyJbbMn2CC0Kf608wL-yNy31IXz7nJan8hKZ>

⁵Source: Central University of Korea College of Art Design Department, Dr. 2010 graduate Liupei Sheng available.

Higher Education Diploma designer specified. The first phase of the project is divided into four professionals, including product design, spatial design, interaction design and graphic design. College aim is to train the mind and market economic development capabilities and innovative designers. Students learn the fifth year, they can prepare double diploma. Training which BAC +3 projects, so that students can obtain a bachelor's degree. Where BAC +2 projects can help students gain a senior technician license. Continuing education is for those working in the field of design and multimedia, and want to further their studies students. Large-scale College located in the northeastern part of the Atlantic coastal city of Nantes college district. College is to maintain close cooperation with many enterprises, so that students have enough internship opportunities. It is the interaction between the educational institutions and many famous universities and business schools, such as engineers, so that students can get a multi-level knowledge. Nantes in support of business associations, the college became a can feel the world's latest trends and research survey platform. Facilitate project management training program allows students at the end of their studies, can quickly adapt to their career.

L'ecole de design Nantes Atlantique's of Design scholarship, emphasis on research and development capabilities, enjoys a high reputation in the international arena. It is a full member of the European Union and the United States Institute of Advanced Design Industrial Design Association. It is one of the European Institute of Design Alliance members, Graduate Diploma awarded by the French Ministry of National Education, the world certified. Institute of technology development center has 35 world-class designers. Each year, the college design courses are a lot of companies with more than 40 co-design projects, design and implementation of over 500 projects. The college emphasizes learning design and design practice combined. L'ecole de design Nantes Atlantique's undergraduate course stage Is a three-year. Whether or theory course design projects practical lesson, every year the implementation of strict elimination system under the supervision Academy Jury members, an average of the following students will be eliminated. There are three professional direction, visual communication design, industrial design, interior design within the College. Students to accumulate credits through freely choose course modules. Three years of study and not strictly professional requirements, but basically in three directions, the students choose their majors by graduation Graduate students choose different designs as their design expertise.⁶

C. United States

Olin College of Engineering is located in Needham, Massachusetts, private undergraduate engineering college. Currently, it is considered to be against the United States in promoting a thorough engineering education system, with a demonstration of meaningful reform. Such reforms are basically belong to the second mode. Olin College of Engineering since the beginning of school, college would only

⁶ Source: Design Master of L'ecole de design Nantes Atlantique's, France, South China Normal University Lecturer, Department of Industrial Design School of Fine Arts Penghua Xing available.

point the direction, no faculties. The aim is to give students and teachers to send a message. You learned or taught courses must be mastery. When you teach math, you can't believe that such knowledge can only be applied in the field of mathematics. In short, the presence of faculties and other institutions, will become an obstacle to cross-disciplinary training philosophy.

A course entitled "Design Nature" is a project freshman compulsory. Within six weeks, to get inspiration from the nature of the animal and to produce a certain amount of budget to attract a fourth grader toys. In the end of the course, a group of 9-year-old to 10-year-old pupils scoring the toy design work as the final evaluation. What is the purpose of this topic? Franklin Olin College of Engineering Dean Vincent • Manno explained that its purpose is to enable students to understand a truth: Engineers must first learn to deal with people, before designing the product, you have to know your customers. Their design course requirements through design practice to allow public review.

Olin College of Engineering in professional learning is project units, each course consisting of a number of small projects. According to the needs of market research, students to determine the content of the project, and then provide technical guidance by the teacher, the way to use teamwork to complete the project. For example, there is a group of students around the computer is a piece of software designed to help one pair spent a lifetime in the United States, but the language barrier is still a couple of old Chinese language learning; Another group of people, in the design of a special cutting board, designed to help a blind housewife with a finger touch, to accurately determine the location of the cooking.

And at a distance of 15 miles northeast of the college office, another reform of higher education is also quietly rising----- Harvard Innovation Lab (I-lab). Although this is not the case for the School of Design, but on the nature of university reform, has the isomorphism.

When 2012 graduate of Harvard University Francisco• Aguirre Le took his idea - can throw the sensor - to Harvard Innovation Lab, he thought he could get the support of just one office. However, I-lab provides rich resources surprised me, as we introduce various related bypass leads talents and investors, providing resources for teachers at Harvard guide us. Meanwhile, as a new company started by the hardware, we need frequent use of 3D printers and prototype lab, where these resources are available free of charge. Aguirre Le said. Today, Aguirre Le named executive chairman has a bounce imaging company.

"Facebook " social network founder Mark• Zuckerberg has said : If there is innovation laboratory, he had not dropped out from Harvard. This is perhaps the kind words. But one thing is clear, support for innovation and entrepreneurship, rather than school reputation, in order to retain "Zuckerberg " hearts.

These things are happening in the American college campus there are some similarities: practical, interdisciplinary,

innovation and entrepreneurship. Such education "revolution" in order to emphasize an idea, based learning process.⁷

V. CONTEMPORARY DESIGN TEACHING MODEL EXPLORING

From the Department of Architecture, College of Fine Arts in Paris, France, the German Bauhaus school, and then to Ulm School of Design, And after the German Bauhaus school staff moved to the U.S. bring influence and change to the many American School of Design; The concept of teaching arts and crafts from the 1980s to the 1990s, modern design concept of teaching, now and then gradually explore the teaching of design and design education developed world standards change. All this shows the design of teaching reform is an eternal topic. Design based on international university education reform ideas, Chinese higher education after entering the mass stage, Chinese higher education after entering the popular stage, design is no longer the focus of undergraduate academic elite culture but culture technology excellence. In higher education into the mass stage design professionals in curriculum design, showing a modular, semi-structured, flexible credit, relatively diverse academic standards, more comprehensive features. According to China's current design teaching framework, we propose the following design teaching improvement programs, discussion with the experts.

A. *Design of the professional boundaries blur limited*

With a professional body, interspersed with other professional courses related design module. This design is intended to enable students to learn a profession, but also an understanding of other disciplines, making interdisciplinary professional mutual and mutually reinforcing. Wu Jia Pei believes interdisciplinary science began corresponding single comprehensive science, combining two or more mutually science, mutual penetration of the cross, not only are present in the natural sciences and social sciences respective internal, but also occurs in a large number of between the natural and social sciences.⁸ In fact, General education originated from Europe and the United, it is also realizing the modern university academic scholars division too specialized, knowledge is severely fragmented, thus creating a General Education. The purpose is to train students to think independently, and be aware of different disciplines, different knowledge that can digest, it provides choices are diverse, and the students through a variety of choice, has been free, smooth its natural growth, the ultimate goal is to develop a complete, full talent.

B. *Design courses related diversification*

Related diversification course is designed for the design professional related auxiliary courses are related diversification, professional span is small, less barriers between professional and diversified. Such as: interior design professional based, architectural design, landscape design, industrial design and graphic design as a supplement. Or visual design based, display design, professional photography, digital

⁷ U.S. data part excerpt from "Oriental Outlook" issue 14, the author: Fan Wang

⁸ Jiapei Wu. Crossover causes and ways of scientific development [M] // greet Interdisciplinary Science Times, Beijing Guangming Daily Publishing House, 1986

media, interactive design, supplemented; Or industrial design-based, display design, graphic design, jewelry fashion design, interior design, supplemented etc.; The purpose of this is intended to make students' time and energy efficient distributed in schools.

Related diversified curriculum model that allows students to discover their true interests and expertise. Students often choose a professional with a certain blindness, because many students before entering school for professional understanding is not deep enough. Related diversification curriculum design, so that students have more to try and find, may thus converted to their true interests and talents of professional located.

Related diversification programs to increase employment opportunities for students. Many students often had to temporarily deviate from their main professional direction due to the asymmetry of employment information. Courses related diversification can increase the proportion of students to adapt to social employment.

Diversified curriculum related student services to increase the coverage of the professional community. In fact, after entering the design market, in many cases designers encounter design business is not necessarily their main profession. Also, many designers are generalists, such as Mies van der Rohe building design guru, while a number of classic design furniture; Ava Alto in architectural design, furniture design, industrial design and other aspects have made remarkable achievements, etc.;

C. Market-oriented curriculum design

Design is a great emphasis on practical. If you do not experience a lot of practical courses and the process involved in the actual project design, it is impossible to become a real designer. In China, the Vocational and Technical College has been largely driven toward teaching mode design projects, and achieved good market employment effects, but also by the employer received. However, in the design of undergraduate teaching in China, market-oriented teaching mode still is not

enough even serious lag, students' knowledge structures were out of touch with the market status. Participate in market-oriented projects designed to meet the design teaching purposes in this regard, the L'ecole de design Nantes Atlantique's mentioned do particularly well.

VI. EPILOGUE

Modern higher education in our country has gone through a hundred years later, to achieve the "popularization of higher education." With the "popularization of higher education" process, design professional also after two decades of reform and opening to achieve a quantitative and qualitative leap. However, changing the design philosophy of education is designed to expand the educational function, design and diversity training objectives designed educational model, curriculum, teaching methods and methods, admission requirements, design management and the relationship between higher education and society, and a series of issues to be improving. This article attempts to undergraduate teaching design disciplines studied under China's "Mass Higher Education" in the background. In consideration of the employment market and the comprehensive development of students design class, as well as respecting the framework of the current design of teaching large premise, proposed a "limited design professional boundaries blur" and "diversity-related curriculum design", "market-oriented curriculum design" teaching structure design improvement ideas. Perhaps, this issue will attract attention from experts. Through the exchange of opinion, we will find more wisdom to solve the problem.

REFERENCES

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TABLE I. COMPARISON OF THE THREE STAGES OF A VARIETY OF CONTENT

	Elite(excellence) stage	Mass stage	Popularity stage
The gross enrollment rate	The following 15%	15%—50%	More than 50%
View on Higher Education	Considered few of privileged	Considered Rights of those who are eligible	Considered An obligation
Higher of educational function	Training and academic elite ruling class	Train a wide range of elite culture, focusing on technical excellence	Preparation for advanced industrial society most people's lives
Educational content and curriculum	Highly structured and specialized(compulsory system, the credit system)	Modular, semi-structured, Flexible credit	Boundaries are still module course, unstructured, between courses is broken
Teaching form relationships with teachers and students	Importance of mentoring relationships modeled after individual guidance or discussion of teaching	Modeled after the relationship weakened to classroom- based, supplemented by discussion teaching	Form more diversified, more use of modern educational technology and tools

Students studying ways	After graduating from high school directly into college ,get a degree boarding and continuous learning, dropout rate	Most students directly after graduating from high school enrollment, enrollment easier uneven level ,higher dropout rates, combined with boarding and commuting	Admission is wide spread delays, dropouts increased, most students have job experience ,the majority of commuting
Characteristics and Boundaries of educational institutions	Common standards, height uniformity, similarity	Standard diversity, More comprehensive	No common standards, more diverse
Scale institutions	Average size of two thousand school-3 thousand small academic community	Total number of teachers and students up to 3million people-4 million people, live in Reading commuting combining university city	Scale unlimited, Time to focus on teaching, Contact loose
Leadership and decision-making	Minority decision of excellence	Decision-making process more democratic And the influence of interest groups	The public and various interest groups more involved indecision-making
Academic standards	Common, higher standards	Standard relatively diverse	Standard more diverse
Admission selection principle	Sexual selection(in the middle school grades or SAT score to selection)	Prospective selection of(non-academic achievement standards plus standard)	Non-selection of(the desire to have the further education and qualification sopen to all)
School management in the form of	Part-time academic staff Administrative duties, election or appointment system, the tenure system	Borne mainly by professional managers	A large number of highly specialized managers appear
Internal management of schools	Professors, veteran professor monopoly management	Young staff and students enjoy a certain management rights	Broad democratic participation
Boundaries of universities and community	Clear boundaries, Enclosed of University	Clear boundaries, open of University	Boundaries disappear, universities and social integration