

Education Models in Industrial Ceramic Design



*A Feyza Çakir Özgündoğdu reviews
the example of Tsinghua University*

*Above: Academy of Art and Design,
Tsinghua University.
Below: The Department's Art Gallery.*



THE DEVELOPMENT OF MODERN DESIGN IN China included concepts different from Western cultures up until the late 20th century. Modern China started to come into prominence in the 20th century with activity and theories of design and with practical applications containing restoration and development methods. It is important to point out certain trends that affect other sociological structures in order to understand the quality of modern design and education in China. In traditional Chinese culture, the doctrine of Confucius, which could be defined as 'avoiding immoderation and being restrained', is a determinant of the expectations and the regards of the society. China initially opened its doors to the West beginning in the middle of the 19th century. Through that period and to the present, familiarization with the concepts of the West, using the goods that the Westerners use, the formation of regard in this way and admiration for the Western life style gained popularity and are now common in most levels of Chinese society.

From the beginning of the 20th century, the admiration of Western products of art and craft began and the traditional arts in China began to transform. Art and craft theory a determining factor in design in China from the 1950s up to the 1980s. Through this period, art and craft is evaluated as a whole when using the term 'design'.

Through the period from the 1980s up until the present time, a more academic approach is seen in the theory of modern design in China. This approach is that the theory of arts and crafts is an approach prevalent for handicrafts; thereby, the theory of design is distanced from handicrafts and traditional concepts. The government, in order to encourage research of design in the



developed countries, sends the instructors and many young intellectuals from the Central Academy of Art and Design in Beijing to the West in these years. These researchers return to China with new methods of design and education. The features that define the modern concept of design and education in China might be summarized in the following way: arts and crafts started to be presented in education in China after continuous influence of the Western designs and products, after learning the results of the study of researchers and university teachers researching the theory of design, actual researches and products (Li Yan-zu, 2007).

The teaching of design is on the rise at Chinese universities as academia rushes to respond to China's dictate that innovation must be a priority. The country is trying to move from 'Made in China' to 'Designed in China' and many believe that design education is a part of that equation. There are currently more than 400 design programs in China, with an estimated 10,000 designers graduating every year.

CERAMIC ART EDUCATION AT TSINGHUA UNIVERSITY

Tsinghua University, founded in 1911, is one of the important universities of the country. The faculty greatly value the interaction between Chinese and Western cultures, the sciences and humanities, the ancient and modern. After the founding of the People's Republic of China, the University was moulded into a polytechnic institute focusing on engineering in the nationwide restructuring of universities and colleges undertaken in 1952. Since China further opened up to the world in 1978, Tsinghua University has developed at a breathtaking pace into a comprehensive research university.

The former Central Academy of Art and Design in Beijing merged with Tsinghua University in the year 2000. The new name of the school is the Academy of Art and Design, Tsinghua University. The school was founded in Beijing in 1956. The academy has a strong teaching staff, a complete offering of disciplines and integrates teaching with creative design, theoretical research and social practice. There are three main majors in the academy: Art and Design, Fine Arts and Theory of Art. These majors contain 10 departments, including the Department of Ceramic Art and Design.

The Ceramic Design Department of the Art and Design Academy keeps introducing and studying the latest foreign thoughts and methodologies of artistic and industrial design. The major of Ceramic Design aims to cultivate students' capabilities in ceramic product design and to enhance China's global competitive force in ceramic products.

COURSES OFFERED IN THE CERAMICS DESIGN DEPARTMENT

Department	Concentrations	Courses Offered
Ceramic Art & Design	Ceramic Art	Wheel, Moulding, Shaping, CAD, Traditional Ceramics Sculpture, Social Survey & Museum Visit, Ceramics History of China and Other Countries, Representational Form, Abstract Form, Mural Decoration & Landscape, Earthenware, Porcelain and Thesis Writing
	Ceramic Design	

THE CURRICULUM

Students getting an education in basic design, in the first year, focus on the main fields of study, which the department assigns. In the second year,

Top left: Professor Zheng Ning in his office.

Top centre: The Plaster Room.

Above: Plaster Models.

Below: Wang Yao Ling showing the students her teapot methods.





*Above left: Cast pieces of the students (unfired).
Above centre: Bisque fired cast pieces of the students.
Above right: Electric kiln room.*



students learn the forming plastic clay, on the wheel as well as the chemistry and technology of basic ceramics. In the third year, an education of industrial ceramics design and production methods-based intensive curriculum is applied. In the last year, the students concentrate on a graduation project and do their studies under the observation of their teachers in the plants defined by their school. These studies may include both industrial projects and free works such as sculpture or decorative products. Students, at the end of every term, are required to take an elective course from a different field.

In order to analyse the industrial ceramics education for this paper, the facts were compiled from impressions and interview texts, by attending the lesson applications of students of the third year and having dialogues with students and teachers.

THE AIMS OF THE INDUSTRIAL CERAMIC DESIGN EDUCATION LESSON AND APPLICATIONS

The aims of the lessons are defined as educating students to have a vision and competence in aesthetics and techniques to meet the needs of the ceramics industry that produces table porcelain. Students are expected to have the proficiency of observing and evaluating aesthetic differences of concepts and trends and to have knowledge of the product portfolios of the world's best known table porcelain producers. Another goal is that the student shall be open to research in order to design modern table porcelain products; therefore, in the first term of the third year, students take the education of design and research and, during this time, critiques are held. A significant step of the lessons consists of design modelling, stripping and ability for die-casting. At the end of the term, products are assessed after they are vitrified.

THE METHODS OF TEACHING MATERIAL KNOWLEDGE AND DESIGN IN COLLABORATION WITH INDUSTRY

While the applications of industrial ceramic design lessons are taught in a theoretical and applied manner in both terms of the third year, they also prepare for a summer-term traineeship or internship, the aim of which is for the students to have sufficient knowledge of material and the capacity to form their designs before they go in to production.

The workshop of industrial ceramics lesson is well equipped including devices for preparing and forming raw materials, glaze and other similar basic devices including laboratories and kilns. Products are fired in oxidation and reduction atmospheres after casting, made with different casting clay supplied from table porcelain plants and the application of glazing and decoration. It should be stressed that the department provides a wide and sufficient application and test field for students in terms of physical conditions.

What is observed from the interviews is that the aim of the industrial ceramic design lessons is to provide workers who will meet the needs of industry. The agreed plants provide / perform a program of three months with the advisors of the groups in the summer term, being conscious that the summer term studies of students comprise a major part of the education period.

The analysis of the design studio and marketing departments are made after the period of basic orientation in the plants. It is one of the priorities of the education period that students have an idea about the trends and aims of the

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Chinese ceramics industry and the strategies and solutions followed when fulfilling these purposes. Students, subsequently, are included in modelling, mould and casting production and applications of decoration, which are the production steps of businesses.

These studies are performed with the advisor-student-business consultant. The company representative has an understanding of the needs of the educational institution and they help to accomplish the education goals that they define with the advisor. It should be clear that there are two groups coming from the Art Academy of Tsinghua University: The groups that make the free graduation projects in the fourth year, together with those taking the education of industrial ceramics in the third year and they all go through their education periods within the process of the system.

These educational studies, accomplished with industry, are structured based on a functional order; while at the same time, the contents of summer studies can be updated according to the needs of each entity and variant student profiles, or to new educational methods. In order to define and monitor these organic relationships, visitor groups from different levels of the ceramics industry come to the department to evaluate the classroom performance and the outcomes. It is remarkable that the relationships between industry and the educational institution are different from the usual private relationships and are concerned with the management of educational policies in consideration of the government systems of the People's Republic of China.

PRODUCTS, RESEARCH, NEW APPROACHES, CRITICS AND FURTHER GOALS

In observing the products of the industrial ceramic lessons of a group of nearly 10 people taught in the department of Ceramics Design of Tsinghua University, almost all product groups seemed to include the Chinese tradition of tea. The approach of the teacher in orienting the student, points to a reliance upon the standards of these unchanging traditions. In industry production, even though Western style tableware is manufactured, tea sets remain as products in which the Chinese old traditions are reflected. The designs made by the students generally consist of cups, a teapot and service materials and their studies of design, production and critique include both aesthetic and ergonomic factors.

Research has been done on the study of material enhancement and design at the level of postgraduate education for the industrial design student. The usability of native and traditional porcelain clay compositions in industry, except in industrial porcelain structures, is one of the subjects attracting the attention of researchers. Research of modern interpretations of traditional form and decoration, likewise, are seen and supported as a contribution to the restoration attempts of the Chinese porcelain industry.

That the studies (on the potter's wheel and on plastic formation that are included in the second year studies and those of industrial ceramics design that are included in the third year studies and defined as the two basic fields of study by the department) are presented by stages is seen as a matter to be questioned and considered. It is believed by the teachers at Tsinghua University that students can increase their industrial ceramics design knowledge when the teaching of these skills is started in the second term of the second year. There

*Above left and centre: Fired pieces.
Above right: Mrs Wang loading
kilns with her students.*

Universities share a significant role in the recent period and long-term policies of the People's Republic of China. Scientific research, technological applications, fields of art and design are widely supported by the government in both a material and moral sense. Education in ceramic design does benefit from its relationship with the developing ceramic industry.



Above: Gas kiln room.
Below: A Feyza Çakir Özgündoğdu,
the author.

are criticisms and suggestions regarding the industrial ceramics design education being given continuously in the third year, with an input program in which theoretical substructure of design is taught in the last term of the second year.

CONCLUSION

China, with its rich sociological structure and rooted aesthetic values, is one culture that has been influenced a minimum by external effects. Therefore, the tradition of the production of ceramics in China includes a 1000 year history of ceramics making under unique and closed conditions. Today, the Chinese ceramic industry has succeeded in taking its place in the global ceramic industry and it is intending to remain at the forefront by attaching importance in this market to product quality and cost as well as identity of design.

The design education, in this sense, has begun to be a course supported in the education strategies of the leading universities. When analysing the outcomes of the department of Ceramic Design of Tsinghua University, it has been observed that there is more emphasis on an education more connected to industry rather than production on a traditional potter's wheel or the artistic plastic applications. Coordinating the physical classroom conditions and education programs according to this, the department considers the education of designers to be important since they will fulfil the needs of a defining vision in the Chinese ceramics industry .

It could be a mistake, however, to think that the process is subject only to industry. With the effect of the monthly free choice lessons that students take at the end of every term, they are supported also for the free projects in their last year's studies. The graduation projects of previous years were not only industrial design projects but they also included pure artistic expression applications, architectural ceramic applications and common research in other areas.

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A Feyza Çakir Özgündoğdu is an Assistant Professor at the Fine Arts Education Department of Ondokuz Mayıs University, Samsun, Turkey. This writing has been prepared with the support of the PRC Government Scholarship (2008-2009 Spring Semester). I would like to present my gratitude to Professor Zheng Ning (Director of the department), Mr Hu Xia Ping (throwing wheel teacher), Ms Hiromi Takemoto (graduate student) and all staff of the Ceramic Art and Design Department of Tsinghua University for their hospitality and help during my residence.