Study on the Issues of Cooperation in Art Education
Analysis of Educational Cases in Pilchuck Glass School

Hui Tang¹,*

¹ Shanghai Academy of Fine Arts, Shanghai University, Shanghai 200040, China
*Corresponding author. Email: 412556813@qq.com

ABSTRACT
This article analyzes the core concept of the education case of the Pilchuck Glass School in the United States to study art education of China. The author extracts a methodology that can be applied to art teaching in China from the cooperative thinking of "inspiring creativity, changing individuals and building teams" in Pilchuck art education, that is, putting the idea of cultivating team cooperation through the current art education. The education of art colleges should not only focus on arts and crafts, history and culture, but also study how to make students trained by higher education have professional qualities and team-integrated ideas. The article finally makes predictions on the future education output of comprehensive innovative talents and the realization of the optimization of the future glass art education system.

Keywords: Pilchuck Glass School, Teamwork, Art education, Creative economy.

1. INTRODUCTION
The United States does not have the historical background of Europe in the field of glass crafts. Therefore, when teaching glass in universities, art schools and high schools, there is no need to consider the various conditions required by the industry when training technical personnel. Glass is purely used as a material for modeling education.¹

In the field of glass disciplines, Dale Chihuly is an artist who is good at combining glass art education and research with glass industry practice. Under the industry conditions of maintaining creativity in higher education, he has increased the economic growth and cultural influence of local enterprises and communities with the development of art glass disciplines, and realized the close connection between education and industry. He said: "We believe that people everywhere can be creative and can learn to cultivate their artistic talents at any stage of their lives and when they develop into artists."²

2. EDUCATIONAL PHILOSOPHY OF PILCHUCK GLASS SCHOOL
The Pilchuck Glass School in Seattle, USA, was founded in 1971 by the world-renowned glass artist Dale Chihuly (Dale Chihuly) and the well-known American art patron Anne Gould Hauberg (1917 - 2016) and John Hauberg. The school is located in a forest in Stanwood, Washington, USA. It is named on the basis of the Pilchuck river. The administrative office is located in Seattle. The name "Pilchuck" comes from the native American voice, meaning "red waters".³

The school was originally established as a small glass blowing studio outside of Seattle, and has now developed into the most comprehensive glass art education center in the world. The educational philosophy of the Pilchuck Glass School is derived from Dale Chihuly's original idea of "artist teaches the artist", which is somewhat similar to the old craftsman's apprentice model among traditional Chinese artists. Although many changes have taken place since 1970, the school's original core value still exists: "inspiring creativity, changing individuals and building teams". The teaching model of Pilchuck

Glass School has persisted for more than 40 years. To this day, the teaching model concept still holds true.

This is an academy of glass art that continues the traditional way of glass blowing of Venice. In fact, since the ancient Roman period, glass has been an art form for a long time. In the endless variety of art media after modernism, it is not easy for glass to gain recognition in the art world. However, following the international glass studio movement led by Harvey Littleton in the United States in the 1960s, artists began to use glass in another novel way. Glass began to enter the field of contemporary art. The Pilchuck Glass School is both a leader in the art world as well as an interlocutor in society. In the process of education, there is no background subject limitation of the artists who come to Pilchuck to study, including interdisciplinary scholars as well as glass lovers. These students began to learn about glass art from the teachers or other students of the college in the course of their studies, as well as from other visiting artists. Later, these students with their own academic background and social experience will unite with Pilchuck's "local" artists to form an art organization, and maintain cooperation and exchanges and joint exhibitions throughout the glass blowing process, and continue to exchange ideas after getting feedback. This "artist teaches the artist" education allows everyone to exert their unique creativity in the learning process, and gain experience in how to coordinate working methods in cooperation, how to work together in a team in a team. "Cooperation" becomes an important part of the creative process in the concept of studying at Pilchuck Glass School.

Pilchuck's educational method focuses on the core of the educational philosophy of "inspiring creativity, changing individuals and building teams". Unlike most media, the characteristic of many large-scale glass works is that they need to be assembled at the correct time and in the right way under the best cooperation, otherwise the entire work may be destroyed. Pilchuck's educational model is based on this artistic characteristic of glass for targeted education.

Pilchuck's students not only learn the basic skills of glass blowing, but also learn how to work with teams and how to collaborate with other artists from an artistic perspective while maintaining artistic integrity. They do not focus on individual or individual competition but on collaborative teamwork with generous knowledge sharing. In the creation, a leader intensively participates in a process of concentration, and then steps back and lets another leader take charge of the next task. After studying in Pilchuck’s glass art education system by glass craftsmen and interdisciplinary students of various backgrounds, they completely got rid of the single mode of personal creation. In such an art education system, art creators feel extremely free and allow “errors” in attempting creation, breaking through the traditional glass blowing technology for thousands of years and expanding the boundaries of glass from education disciplines.

3. COOPERATIVE THINKING IN THE CREATION OF GLASS ART

Syrian craftsmen invented the glass blowing technique in the 1st century BC, and the establishment of the ancient Roman Empire used blown glass for daily art dissemination. By the Middle Ages, Venice had become a major center for glassmaking. The glass blower uses a blow pipe to blow air into the preform mold for forming the molten glass. There are many tools involved in blown glass, including: more than three furnaces, blowpipes, molds, workbenches, engraving machines, wooden blocks, jacks, tweezers, paper, various scissors and other shaping tools.

"Complex works are usually made by a team rather than a single person. I watched the creation of the golden leaf for the chandelier. Although the leaf is not big, it was made by 3 people. The most surprising thing is that they did not talk to each other. Everyone knows what to do and when it must be done. One glassmaker places the glass in the fire, shapes and colors it. Others added smaller parts of glass to his decorations, and then he could continue to use them." ("Figure 1")

---

Zhu Wentao, A Comparative Study of the Art of Creation in Ancient Rome and the Han Dynasty [D]. Soochow University, 2010.
The development of blown glass technology can enable artists to produce a large amount of glass in a short period of time, so many artists choose to use glass blowing for their creations. The traditional glass blowing process is completed by a team, and the team completes the glass blowing more efficiently. Especially when the volume of the work is large or complex, several workers are required to cooperate in an orderly manner, with a precise time dimension and precise division of labor, to jointly cooperate in the blowing of a large piece of glass. The working place for blown glass is usually an indoor building space with more than three people, which includes the necessary equipment for blown glass: furnace, crucible and annealing furnace. Professional glass artisans concentrate their work in the assembly line and perform a part of the glass creation process. Modern glass workers, like traditional glass workers, have created blown glass ranging from special crafts to practical glassware.

This clear division of labor can efficiently use the blown glass technology to quickly produce a large number of blown glass components. After the blown glass components are completed, the team then conducts effective installation. Experienced glass blowing workers can not only blow glass products, their years of experience in the glass industry and scientific knowledge related to glass art can help researchers and industry leaders combine knowledge with practical experience.

One of the founders of the Pilchuck Glass School, the size and scale of artist Dale Chihuly's glass installation is huge and attracts attention. Not only does this rely solely on the artist's personal strength, it is related to the way Chihuly has always attached importance to the team's glass blowing form in the factory. The experience of visiting the Veneni factory on Murano in Venice in 1960 gave Chihuly a deep understanding of the importance of teamwork for glass blowing. The team plays a central role in the successful glass blowing, especially in the large-scale and complex glass blowing. In this process, the collaborators who need skilled glass blowing have a clear division of labor at each joint. In such a group, under the premise of common goals and creative enthusiasm, the clear division of labor and the reasonable distribution of craftsmanship make the working method of the birth process of each glass work possess the nature and possibility of performance.

On Murano Island, glass blowing has a long history of viewing movement for tourists, which inspired the artist Chihuly to establish his own team and company after 1980, using a collaborative approach to initiate a revolution in glass art, turning art glass to sculpture thoroughly, and driving the development of related creative economy while continuously improving the efficiency of creation. This includes: solving the problem of the sale of artworks, the issuance of related derivatives, the follow-up cooperation of brands, the employment economy of company personnel, and even the growth of local economy driven by art. Chihuly's art works are usually proven to be the result of a team. The artist's particularity lies in his ability to integrate the most innovative teams based on specific art projects, including: glassblowers, lighting experts, sculptors, metalworkers, woodworkers, photographers and efficient managers. Driven by the infinite creativity of Dale Chihuly, cooperative thinking has produced extremely creative enterprises and innovative personnel.

This form of artistic cooperation originated from the Renaissance and Baroque artists, and today's art education significance lies in the promotion of teamwork thinking throughout all fields of art. Today, not only in the arts, but also in the cooperation of collective production and various highly specialized chemistry subjects, it is easy to generate more innovation.

4. INSPIRATION FOR MODERN ART EDUCATION

There is a clear contrast between the career paths of graduates in the art field and those in other industries. How can higher education institutions improve the survival ability of art students and graduates entering enterprises? How to cultivate the importance and relevance of students in the creative field in concept and practice? Based on these issues,
due to the special professional status of artists, art graduates need to consider what their market is, how to cherish time, how to achieve commercial cooperation in the field of art, and how to cooperate. In today's art education, the corporate skills in the student curriculum are usually considered to be very trivial issues, and have little relevance to daily teaching. The lack of corporate skills and cooperative thinking in cultivating education can easily lead graduates to realize their "dreams" when choosing a career, without considering any economic gains and markets. This seems reasonable in the short term. In the long run, graduates will face the dilemma of resignation or even unemployment due to various reasons such as excessive survival pressure and disconnection from the company and society.

"The glass art education in the U.S. experienced rapid growth from the late 1970s to the first half of the 1980s. There was a period of rapid growth during the first half of the 1980s. At one time, more than 300 universities, art academies, and high schools all carried out glass education. However, due to funding and equipment costs, many schools had to stop the glass major. As a result, by 1990, the number of schools that continued to open glass majors dropped to more than 100. However, with the support of some enterprises and private organizations, many creative glass centers have been established to support the glass studio movement. With the support of the Support Creation Center, young American glass creators have the opportunity to test and temper themselves and become famous as independent glass creators. They formed a large artery that supported the vigorous development of American glass studios."  

The decorative glass courses in China basically belong to the professional fields of decorative arts, arts and crafts or public arts. At present, there are only a handful of highly efficient subjects with experimental glass craftsmanship. Among them, the only colleges that cultivate postgraduate degrees in glass art are the Shanghai Academy of Fine Arts of Shanghai University and the Academy of Fine Arts of Tsinghua University. It can be seen that limited educational resources can hardly meet the demand for talents in the huge glass market in China, and the market for specialized glass talents is increasingly in short supply.  

The basic idea of considering art production from an economic point of view is that the appearance of an artwork is determined by its economic purpose, rather than abstract concepts and uncertain uses. The factors considered aesthetically are not decisive. Most artists are still "aliens" in the factory, and the artworks they produce are separate from the works on the factory floor. At the same time, the industrialists who invested in economic production did not fully understand these "easel" artists. They believed that these artists did not use their knowledge and skills in production, and in fact did not care about production.  

Therefore, in the process of art education, educational institutions need to increase the training of courses related to the creative arts industry for graduates. In fact, a large part of the art-study groups are engaged in non-art related industries. In these groups outside the art field, it is necessary to set up a specific education plan that meets market needs and business cooperation awareness, and not everyone uses a general course teaching plan to teach. In educational practice, students' academic research is linked to the "performance" of the project in social reality, and they can reflect on their academic research in the process of cooperation and docking with professional companies and personnel under realistic conditions. How to inspire students to use subject knowledge and skills flexibly in social practice, and to explore a path to transform economic benefits, is an area that needs innovation in the modern art education model. This set of innovative methods may include:

- Exploring the thematic methodology of obtaining funding, sponsorship and marketing in art management.
- The path of cooperation with art organizations.
- Integration of educational expertise and corporate culture in terms of operation and communication.
- Transforming art projects into a new type of knowledge economy and be closely connected with society and culture. Art organizations that are good at making use of cooperative relations will play an important role in promoting urban rejuvenation and culture.

5. CONCLUSION

Many future art and cultural innovations will be produced in factories and studios in practical applications, not just in the relatively closed personal studios of artists. Higher education should focus on

---

cultivating students’ entrepreneurial awareness of business cooperation in the practical orientation of art education, taking the practical orientation of school-enterprise cooperation as the driving force for educational research, comprehensively applying the subject knowledge of teamwork in a cooperative art community, and having multi-skilled, cooperative, and flexible creative responses in the face of industry changes. Colleges and universities can also do more professions and cooperation that combine learning experience with corporate skills, incubate cultural integration in higher education, and establish close connections between higher education and industry.⁷

AUTHORS’ CONTRIBUTIONS

This paper is independently completed by Hui Tang.

REFERENCES


---