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On the Development and Cultivation of Students' Conceptual Thinking in Design Teaching

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Abstract: *Traditional design basic teaching focuses on the cultivation of creative design thinking and formal aesthetics. Tracing back to the origin, the birth of any idea or form is promoted by a concept. Therefore, the key to the improvement of basic design teaching is to guide students to the formation of their own design language and the development of conceptual design thinking. Combining teaching practices, this article explains the multiple characteristics and important values of conceptual design thinking, with a view to injecting fresh ideas into basic design teaching.*

Keywords: *Design basics; Teaching; Conceptual; Design thinking; Development*

Conceptual Design Thinking and Basic Design Teaching

Any design and creativity originate from a certain concept. In a word, the concept is the mother of design and the soul of creativity. Concept-one of the initial beginnings and basic forms of thinking, reflecting the general and essential characteristics of objective things. In the process of understanding the world, human beings extract the common points of things they perceive, summarize and summarize them, and form concepts. Modern media and psychology believe that a concept is a thinking conclusion formed by people on the characteristics and meaning of a certain thing and its development process. Mankind's understanding of the world, all scientific knowledge, ideology and culture, are composed of concepts. In this sense, without concepts, there would be no human history and civilization achievements. The concept itself has two basic elements: connotation and extension. Connotation is the category that reveals the essential attributes of the object, which is usually determined by the method of definition; extension is the category that describes the external domain of the object, which is generally clarified by the method of division. Different life experiences, different understanding needs, the concept of the same thing can produce different levels and perspectives of understanding, so that the concept has the characteristics of complexity, vagueness, change and development. Design begins with the concept, becomes the originality, and ends with the physical object. With the rapid development of science and technology in the late 20th century, various design concepts were continuously updated and changed, and a design method that was compatible with the new era of high technology and new thoughts—conceptual design was born. Modern design responds more quickly and sensitively to market information. Designers' exploration of new fashion, new technology and functions is often done through concepts first, and conceptual design has become a trend-setting vane. Not only is it widely concerned in the design field, but even in many other industries featuring innovation, such as IT, tourism, commercial marketing, performing arts planning, film and television creation, etc., people are talking about the topic of conceptual

design. Design itself is the proposal of a new concept. Conceptual design explores the dynamics and trends of this process, and strives to find new breakthroughs in a limited space. Conceptual design is a complete and comprehensive design process. It unifies design principles, market requirements and the designer's subjective initiative through design concepts, and answers a series of design questions in a holistic and macroscopic manner. Design thinking is a multi-level, three-dimensional and complex systemic activity. Design concept is a refined thinking summary of the thinking and creation produced by design. From the perspective of the way of thinking, the design concept focuses on the integrity, interpenetration, diversity and symbolism of thinking, and the continuous interpenetration and influence of various elements to meet the needs of different applications.

As the concept of knowledge and methodology of the design profession, the basic courses play a leading role and important position in the whole design education. The development of the times and the emergence of new media and new techniques have broadened the concept and connotation of design basis, and promoted the further update and improvement of traditional design basis teaching. Starting from the design concept, guiding students to explore the essential space of design and improve their comprehensive quality, among which the cultivation of design thinking is the most important thing. Traditional design basic teaching focuses on the cultivation of creative design thinking and formal aesthetics. Tracing back to the source, the birth of any idea or form is promoted by a concept, and the concept element is the thinking carrier and expression language of creative design. Therefore, the key to the improvement of basic design teaching is to guide students to the formation of their own design language and the development of conceptual design thinking. In the process of creating its own tangible world, human beings have gone through the process of forming a complete system from individual parts to the overall scale. The concept is practical, feasible, and rooted. Conceptual design thinking has a broad guiding role, including the strengthening of basic training and the extension of applied design. In view of this, design basic teaching should strive to transform students' understanding of design into design concepts, and derive the most common phenomena and laws in the field of design.

The Multiple Characteristics and Important Values of Conceptual Design Thinking

Originality and Development

Conceptual design emphasizes a high degree of autonomy and originality in design, and excludes existing things in terms of form and content. Even in the face of classic forms and symbols, they must be sublated with new methods and new perspectives, and they must not be confined to them. The rules of the predecessors are not just like others, but to independently grasp the conditions and explore new methods and breakthroughs to solve problems. The concept is the first element of the design. The deepening of the connotation of the concept and the expansion of the extension are the process of the continuous formation of thinking and the continuous evolution, update and improvement of the design. The concept of design is always a state of development. As a designer's creative awareness, it continuously brings demands and impacts on design innovation in terms of production and life concepts, value aesthetic concepts, and national ethical psychology.

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Abstract and Conceptual

The so-called conceptual thinking refers to a form of thinking that reflects the essential attributes of an object. People extract an abstract overview of the essential attributes from the various performance characteristics of the object. Any design conceptual thinking also has a certain degree of abstraction. Conceptual design is a portable and overall system design. No matter its scale or complexity, it seeks the liberation of concepts and personality in thinking, condensing the designer's Certain concepts, ideas, and propositions. For example: Le Corbusier's Langxiang Church, Wright's Flowing Water Villa, Mies' Farnsworth House, etc., without their new architectural concepts, without their unwavering commitment to these ideas, these works would have been It is impossible to become a classic and go down in history.

Exploratory and Avant-garde

Conceptual design generally does not involve too much specific application functions (such issues are often deepened in the implementation phase of program design), even if specific details are considered, it is conceptual, principled and logical inference. It is more like an exploration leading scientific experiment, ahead of real life, at the forefront of the times, to ensure imagination and development space for thinking. Even for a wild goal, conceptual design thinking is meaningful. It can broaden your thinking, explore inspiration, and highlight the huge performance of high efficiency, high quality, and short cycle. Conceptual design is based on the avant-garde consciousness of the times, and encourages designers to have enough courage to try the latest technology, materials, crafts and concepts. The two enlightenment principles in modern architectural design are derived from two avant-garde conceptual thinking explorations. One is the floor slab and beam system created by Le Corbusier, which promotes the concept of free division of internal space in the building. The other is Mies van der Rohe's glass curtain wall merging style. These two concepts became the magic weapon of 20th century architectural design, and too many designs and forms were derived.

Future and Leadership

Conceptual design is not only an advanced design phenomenon, but also a typical design form. Its future spirit and leadership temperament make modern design more social, predictive and innovative, and avoid the fall of stereotypes and cliches. Conceptual design is essentially the design of ideas. What it provides is the concept, the most core part of the design field, and the driving force of design, leading the trend and future of design. Treat conceptual design with a scientific attitude, reflect on design traditions and the future with conceptual thinking, observe the level of social and economic development, and the changes in people's ideology and lifestyle will make designers' thinking more open and free, and modern The design has more material and spiritual layers.

Research on the Teaching Practice of Conceptual Design Thinking Development

In teaching practice, there are various specific ways to develop conceptual design thinking, which are worth exploring. Here are a few examples for further exchanges among colleagues.

Topic 1: Observation and Understanding

Design arises from the attention to the surroundings, such as the understanding and expression of the concept of “nature”. Human activities always take nature as the carrier and regard nature as the object of study, reflecting the dependence of man on nature, and all kinds of natural forms are always Bring designers a steady stream of creative inspiration and design concepts. This topic is not to find an answer to a given question, but to re-understand and define nature from a new perspective, discover and unearth the concept of nature. Students can observe and express nature through photography combined with hand-painted methods, and express the shock of the soul and the awe of nature with the language of graphics: a new bud that is strong and sprouting in various harsh environments allows the audience to realize the greatness of vitality. Perception gains appearance, creates extraordinary with the help of concepts, and then deduces a story and meaning about life... This topic focuses on transforming observation into enlightenment of ideas, accompanied by the deepening of certain emotions and concepts, not just satisfaction It is about the beauty of the surface form.

Topic 2: Analogy and Experiment

This topic is not limited to individual experience and realistic time and space, and strives to provide a relaxed creative platform in teaching, encourages students to freely think and argue and boldly experiment, explore the essence and connection of things, and subdivide and visualize design concepts. . This is also a process of concept screening. Students will sort out and refine every detail of novelty, difference, ingenuity, and beauty. The more experiments, the closer it will be to the concept in their minds, which leads to the future of design. door. For example, in the face of familiar Apples and watches in life, they are both an image and a symbol, inducing students’ imagination to explore all the possibilities of creativity, and they will find that the design ideas can be so clear and smooth, and the flash of inspiration is so continuous. , As free as Sun Dasheng’s seventy-two changes.

Topic 3: Convergence and Divergence

Without limiting tools and objects, it can not only reproduce all the macro or micro images in life, but also complete different forms of works with credible hand graffiti, guiding students to express their own interests, memories, and concepts in a visual language that is rich in personality and characteristics. The abstract and concrete forms conduct in-depth analysis, reasoning and integration in material and texture, structure and space, and establish a powerful fulcrum for them to establish a new design concept framework. This promotes the diversification of design thinking and the flexibility of creative methods, which greatly enriches the design language of students.

Topic 4: Experience and Capture

Design is a posture of thought, derived from the experience and attitude of life. The purpose of conceptual design thinking development is to train students to use concept capture and epiphany recording methods to grasp the truth and essence hidden behind the phenomenon as a whole, which is from disorder to order, from concept to materialization, from form to language Sublimation of the environment. For example, “cocoon” is

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beautiful and poetic, and it contains the formal elements of point, line and surface. Through association, transplantation, and induction, students use flat and three-dimensional forms to express the illusion and emotional loss of people in the Internet age. The Internet is like a cocoon wrapped in layers. Is it constraining ideas or flying dreams? Designers often have this kind of realistic experience. In the face of creative dilemmas, how to draw cocoons into silk, give birth to wings, and turn away from butterflies is also a flying beyond oneself.

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