

Creative design education research on multi-dimensional integration of visual communication design under the driving force of digital design

Li Chang¹, Xiaoxia Li²

1. Associate Professor, Haikou University of Economics, Haikou 570100, China

2. Lecturer Hainan University, Haikou 570100, China

Abstract: In 2022, a new era was born - “meta universe”, the concept of the rapid potential to penetrate into all walks of life, and with the arrival of the “meta universe” era, its transformation and change also bring new opportunities to the field of visual communication design. In the more than 40 years of reform and opening up, visual communication design has undergone several periods of educational development from the change of discipline names: Decoration design, graphic design and visual communication design period, from the name change, it is not difficult to see that visual communication design is changing step by step towards the integration of all media, especially in the “new liberal arts”, “digital design”, “meta-universe” driven by this big change, visual communication design has further become a cross-border design integration professional.

Key words: new liberal arts; Teaching reform; Digital design; Meta-universe; Transboundary design; Visual communication design; All-media fusion

In August 2018, the CPC Central Committee proposed the construction of “four new” in the document of the National Education Conference, that is, “Higher education should strive to develop new engineering, new medicine, new agriculture, and new liberal arts”, and the concept of “new liberal arts” was formally put forward. On April 29, 2019, the Ministry of Education, the Ministry of Science and Technology, the Ministry of Finance and other departments jointly held the “Six excellence and one top-notch” plan 2.0 launch conference, marking the official opening of the national “four new” construction project. Thus, the “new liberal arts” has moved from the concept to the formal implementation. With the implementation of the concept of the new liberal arts, how to develop a new teaching model of visual communication design in the new era, the new century and the new situation, interdisciplinary, digital model and practical education, has become my research direction.

1. The evolution and development of visual communication design education

Throughout history, visual communication design has developed from the early arts and crafts education to today’s art and design education, and has developed towards multi-dimensional and interactive design education, and has developed its infinite vitality in the changes of The Times. In recent years, the major of digital media art has been separated from the major of visual communication design, which also represents the arrival of an era of digital design. Artificial intelligence and painting AI are greatly impacting the visual communication design education. At this stage, people can use the painting AI software to describe the language without learning the basis of painting, so as to get the desired image effect, which is undoubtedly a new challenge to the visual communication design education.

1.1 Evolution of visual communication design education

The early art design spread through the mentoring system, from the era of manual art to the era of electronic digital information design today, it has experienced thousands of years of history, and human beings have contributed her outstanding achievements in the development of art and aesthetic education. From the murals of ancient times, to the art works of the Middle Ages, to the rich forms of visual expression today, all of them are showing the charm of visual communication design! The education of visual communication design has also played an important role in various historical periods. From the early painting art, sculpture art, architectural art to the modern visual communication design, product design, environmental design and other works, visual communication design has penetrated into all walks of life, every industry and every profession can not be separated from visual communication design.

1.2 The development of visual communication design education and teaching under the new historical conditions

In the new era and new era, how to build visual communication design education into a modern profession, and how will it develop under the new historical conditions? Nowadays, people have more diversified channels to obtain information, and they can create the era in the virtual space. This digital, virtual and interactive carrier changes people’s production and life style. The education and teaching of visual communication design also regain a new life in the changes of The Times. Under this mechanism, visual communication design education begins to join the VR experience education, digital media education, interactive education, practical education and other new education models. This topic is also elaborated around these new models, and strives to provide an effective theoretical and practical support for the development of visual communication design education and teaching model in the era of “new liberal arts”.

2. Under the background of “new liberal arts”, what kind of teaching mode does visual communication design education need

Under the background of “new liberal arts”, our university will be identified as the first batch of provincial demonstration applied

undergraduate universities in Hainan Province in 2021. Under the overall leadership of the school, our college will introduce top masters in China to give art lectures and education and teaching activities, expand the artistic vision of teachers and students, and enable teachers and students to quickly enter the era of international design teaching under the guidance of the masters. And in the near future, we will introduce senior designers and professors from abroad.

2.1 Reform of teaching methods

Design education itself can not be separated from The Times, opening the horizon, facing the international, facing the future is the only way to design. Since 2021, our Institute has successively launched the famous lecture hall of “Nanhai Academy of Fine Arts ·” The Light of the South China Sea “Designing the Future. “Nanhai Academy of Fine Arts ·” The Light of the South China Sea “Design the Future” celebrity Forum and other education, teaching and practice base construction activities, and increase the content of the celebrity lecture hall every year, successfully laid a solid foundation for the transformation and development of visual communication design education in the new era.

2.2 Curriculum reform of education and teaching

Through cooperation with various off-campus enterprises, practical teaching hours have been strengthened in the curriculum, and personnel training plans have been revised to take practical teaching as the fundamental educational concept. The early talent training plan has been revised to 25% of the total hours for theory and 75% of the total hours for practical teaching, and the hours for practice and practical training have been strengthened. In addition, an independent studio practice base was built to make full preparation for practical teaching. At the same time of the teaching curriculum reform, digital, interactive, virtual reality technology and other intelligent demonstration and interaction effect to display the design, in order to change the early manual mode, greatly strengthen the presupposition of design products, and more real and effective!

2.3 The influence of the development and popularization of intelligent design technology on the visual communication design profession

With the advent of the “meta-universe” era, intelligent design technology has been unprecedentedly developed, thus making all walks of life take on a new look. Education and teaching courses for visual communication design majors are gradually developing into tools to enhance user experience. The application of design artificial intelligence +AR technology in packaging design of visual communication design can enhance the interaction and experience sense between users and packaging design products on the basis of visual communication, and bring more added value to packaging design products. The most important difference between AR packaging and traditional packaging forms is the interaction of packaging design products. After the use of AR, packaging in addition to the original protection, anti-corrosion, introduction and other basic functions, but also become the carrier and platform to carry brand and product information.

The change of these technologies and equipment has laid a technical and material foundation for the future development of visual communication design. We can rely on modern digital platforms to play an important role in visual communication design.

3. Interactive thinking and visual communication design

The early visual communication design was based on the object in the design effect display, which derived a lot of proofing systems, such as: Color inkjet, digital printing, fast printing and other industries, and with the advent of the digital media era, the product display function of visual communication design has been unprecedented development, augmented reality technology, virtual imaging, digital media and other technologies for visual communication design product display and virtual output provides a broad space.

The artificial intelligence technology in the field of visual communication design first appeared in the field of packaging generator. The development of these intelligent technologies has greatly improved the interactive thinking mode in the field of visual communication design, not only in the interactive education mode in education and teaching, but also in the interactive display mode in docking with customers, which has opened up a new method of practical technology for the education and teaching of visual communication design.

3.1 Application of interactive teaching thinking mode in visual communication design education

Interactive teaching is a teaching method in which teachers’ teaching and students’ learning carry out equal communication and independent interaction around a certain issue or topic on a multi-point free entry teaching platform under the macro teaching situation. It has important educational value. Today, on the basis of the vigorous development of artificial intelligence technology, interactive teaching is no longer just the form of equal communication and independent interaction in the early days, it has been extended to the interactive and situational experience of teaching. This kind of education mode is applied by the master in the classroom. We have hired professors and doctoral supervisors from top art colleges at home and abroad, and have adopted the “school-enterprise co-construction” mode to teach. The same courses of top art colleges are synchronized. The classroom adopts the model of “learning-centered and teacher-led”. The classroom is student-centered and practical exercises are conducted in groups to actively grasp the learning dynamics of students, let students participate in practice and collect data, and tap the potential of students.

3.2 The application of interactive practical thinking mode in the display of visual communication design products

As a traditional course of visual communication design, packaging design has been continuing the early teaching mode. With the rapid development of digital industry today, the concept of packaging design has also begun to be constantly updated. French department store has carried out an augmented reality technology and brand packaging marketing activities, first in the mall to establish an interactive screen, you can capture the appearance of passing consumers, but also to capture the packaging information of the products purchased by consumers, so as to transform the packaging information into interesting visual effects. For example: the consumer bought some milk, when she

walked to the interactive screen, the milk packaging in the shopping cart turned into a strong cow on the screen, and the origin and feeding environment were listed on the screen. This increases the interaction between the packaging and people, which makes it easier for consumers to accept.

In 2017, IKEA, the Swedish furniture retail giant, launched IKEA Place, its new augmented reality app,

Using 3D and Apple's ARKit technology, IKEA Place can highly restore the size of all products, detailed design, and even the texture of the fabric, brightness and shadow of the product. Consumers only need a smartphone to show how IKEA products are placed in different places in their homes. This also provides a forward-looking topic for the teaching of display design. Virtual reality teaching will be added to the training plan of digital media art majors in 2022, and the teaching mode of display design will be changed into virtual reality technology teaching, which can solve the non-three-dimensional teaching process in the previous teaching process. Let students have real experience to show the integrity of the work. And gradually apply the laboratory to social practice, in this "Thousand piles of snow -- Waves · Outer mound" exhibition, the use of digital twin technology, online and offline synchronous development, next will dock the meta-universe space, make 3D virtual scenes, establish a virtual exhibition hall under the meta-universe form.

4. Extension and growth -- the development of multi-dimensional integrated creative practice teaching in visual communication design

Through continuous exploration, from 2021 to 2023, under the leadership of the school leaders, the majors of Visual Communication design and digital Media Art will rise rapidly, and under the guidance of the "new liberal arts" theory, they will not only make remarkable achievements in teaching, but also in organizing and constructing exhibitions. We complete more design works through interdisciplinary work. Take the exhibition "A Thousand Piles of Snow -- Riding the Waves · Outer Dun" as an example. In this exhibition, the leaders of the Academy cooperated with Nanhai Film Academy, Nanhai Academy of Fine Arts, and College of Art and Science and Technology. The use of music, dance, animation, digital games, costume performances, stage plays, poetry recitation and other different forms to present the past, present and future of Weidun Village, and the first use of digital twin technology in the way of publicity, synchronous offline exhibition, create a digital exhibition in cyberspace, to commemorate the 5th anniversary of Hainan Free Trade Port, this exhibition not only has a visual communication design professional, Also covers clothing design, film design and many other disciplines, the use of multi-dimensional integration of means and methods, for the arrival of the "new liberal arts" era to create a new education and teaching exhibition. We also continue to explore more cross-integration, for the future visual communication design and digital media art education to open new ideas, the construction of a new form.

References:

- [1] Kang Zhang. Research on the Status quo of Design Art education in China [J]. Popular Literature and Art,2010(8):56.
- [2] Xiaoli Song,Hao Yan. Interactive Media Design [M]. Wuhan: Wuhan University Press, 2021(1):198.

Project:

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