THE ART OF DIGITAL TRANSFORMATION IN FINE ARTS: LIBERATING CONTEMPORARY ARTIST IN VIETNAM

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Abstract: The world has entered a new era with the outstanding development of information technology. All areas of human life (culture, economy, politics, education, etc.) have made significant development steps to adapt to the new context. Art is not an exception to this rule of progress. In Vietnam today, the application of information technology in the digital transformation process has brought about great changes in visual arts. This takes place from the low-level (digitizing visual elements) to the high-level (creating new art forms). Vietnamese artists are liberated from difficulties and challenges in their works such as approaching to art theory and practice of art in the digital age. The article mentions the influence of digital transformation in the artistic creation process of Vietnamese artists today. By interdisciplinary approach: fine arts, science, and technology the paper proposes a digital transformation model that has three main phases/ levels to launch digital transformation in Vietnamese visual arts. It bases on four elements: Human, Visual art, Activities, and Environment. The research paper contributes to helping artists with difficulties, challenges and to limit unnecessary risks in their professional activities: digitalizing artworks, art-forms, digitalizing the creating process as well as new way of communication, conveying artworks to their audiences, etc.

Keywords: digital transformation, arts, technology, artist liberation

Introduction and context

Only 10 years ago, the influence of information technology (IT) in the field of arts in Vietnam has not been paid enough attention and appreciated. Although the application of IT has been applied in many important fields of science and technology such as medicine, mechanics, environment, etc. In the field of art at that time, there were few people to attention to artists who use computers to create arts. Even a large number of artists have not officially acknowledged the application of IT in art creation as a form of art creation in Vietnam. Digital arts is also not recognized as an art form because digital artworks are not created in the traditional way that artists have always done. Moreover, the beginning of digital arts started with scientific, logical, and exact applications. At that time, art critics in Vietnam did not really approach digital arts works to orient art and forecast the birth and explosion of digital arts. However, the application of IT in art creation still exists and develops strongly in Vietnam in recent years because this digital transformation process has greatly influenced the art industry. The advent of new media has created a virtual world in which people can live, interact and behave like a real world. This directly affects the way of thinking, the choice of topics, the technical methods in creating and receiving art. The wave of digital transformation brings digital arts into contemporary Vietnamese art, it changes the way of thinking and acting of many artists in Vietnam. Advertising revenue due to the application of IT in the arts will increase to VNĐ 24,000 billion by 2020 (Ministry

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of Information & Communications of Vietnam, 2020). Areas such as website design, online games (Games Online), television production, media publishing also growing rapidly, etc. According to statistics of the Department of Information and Communications the revenue growth rate of the digital content industry in 2009 up to now, growth of the industry has reached an average of 10% per year. In the past two years, due to the covid epidemic, the growth rate has dropped to less than 10%, but it is also promising great potential in this new field (General Statistics Office of Vietnam, 2021).

Overview of digital transformation in the field of fine arts in Vietnam nowadays

To study the digital transformation process in the field of Fine Arts in Vietnam today, we conducted a study on 20 prestigious art training institutions in Vietnam (Association of Universities of Fine Arts and Applied Arts), art organizations, advertising associations, Vietnam Fine Arts Association, interviews with leading experts who are artists, art managers, etc. In addition, we also analyzed policies, Nation's macro policy on digital transformation in the fine arts field to provide comments as well as the main principles in the digital transformation process in the art field in Vietnam. From there, the framework is drawn to decode the principles and digital transformation in Vietnam today:

Currently, there are many different definitions of Digital transformation in the world, but it can be generalized that digital transformation is the process of transferring an organization's activities from the real world to the virtual world in a cyber environment. As a result, everyone in the organization has more access to information, shortens distances, narrows space, saves time and effort, and enhances stakeholder experience and satisfaction. So they help that organization to solve many of its limited problems and create momentum for sustainable development. It can be said that Digital Transformation is an inevitable trend, happening very quickly, especially in the context of the current Industry 4.0 revolution.

According to Gartner - the world's leading information technology research and consulting company defines digital transformation in businesses is as follows: "Digital transformation is the use of digital technologies to change models business, creating new opportunities, revenue and value" (Trang, 2019).

According to Microsoft, "Digital transformation is about rethinking how organizations bring people, data, and processes together to create new value" (Quyen, 2020). It can be understood that Digital transformation is the application of innovation and rapidity of technical technology to solve problems. Or it can be said that Digital transformation is the use of digital technologies to change the operating model, create new opportunities and values.

Currently, the concept of digital transformation is often confused with other concepts such as digitization and digitalization. "Digitalization" is the process of modernizing, converting conventional systems to digital systems, which is the transformation of real values into digital form. "Digital transformation" is when data is already digitized, and we use advanced technologies to transform it and create a new, better value (Quyen, 2020). "Digitalization" can be seen as part of the "Digital Transformation" process.

The application of advanced technologies in the digital era has brought about great changes in the concept as well as the form of art creation. As society develops, the economy, science and technology,

culture, and people's demand for aesthetic enjoyment are also enhanced and increasingly diversified. Visual arts themselves also need to have qualitative changes, diversify content and expression materials to suit the development of society. In particular, there needs to be a way to bring art to the public. The artworks cannot be "frozen" and lies passively in small galleries or museums that are cramped with few visitors. To solve these problems, the help of information and communication technology is urgently needed. Digital transformation in the field of fine arts is similar to the case of photographic art in the history of development, which has to be transformed into film and television art. Through digital arts and information technology, artists also satisfy their experience on many medium and the convenience of modern digital technology.

In the context of being affected by the current Covid-19 epidemic, digital platforms and online applications are a suggestion for people doing culture and art. Vietnam has oriented a number of cultural and artistic activities to transform online performances on digital platforms, social networks, and develop the performance model of "Online Theater" etc. Vietnam Fine Art Museum has officially launched iMuseum VFA multimedia narration application built and developed on the 3D tour online technology platform integrated on the website platform (vnfam.vn) of the Museum.

Digital transformation model in the field of fine arts in Vietnam today

Through analyzing digital technology in the field of visual arts in general and fine arts in particular, we realize the important factors in the digital transformation process in the field of fine arts in Vietnam today. They are the human factor; visual elements of visual art; artistic activities; and environment. On those factors, we generalize into a digital transformation model to shape and develop the digital transformation strategy in Vietnam today. This proposed solution model needs to be adjusted in each stage to be more suitable and closer to the actual situation:
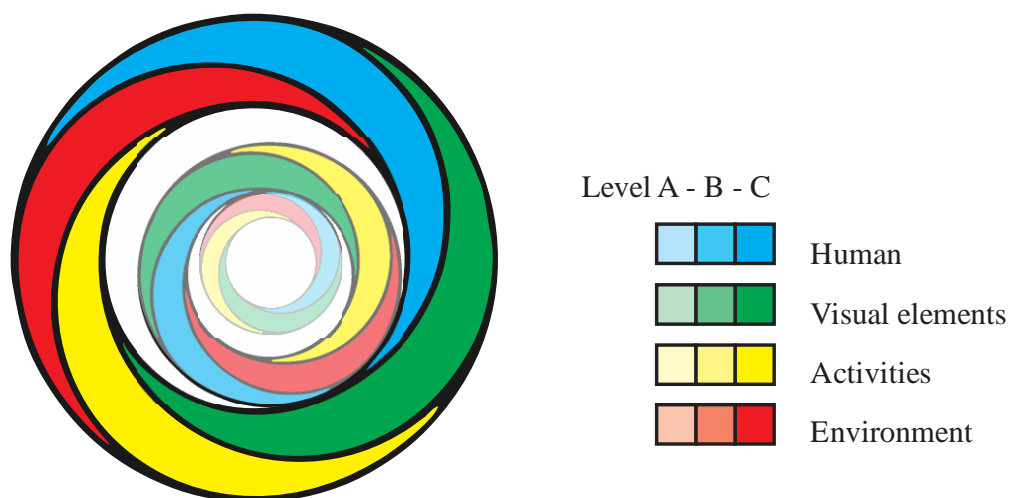

Figure 1: Model of Digital Transformation in the field of arts in Vietnam nowadays [author]

The digital transformation model in the field of arts in Vietnam is divided into 3 main phases:

▪ Initiation phase - Level A: Initiating the digital transformation process by combining the main factors: Human, digitalizing visual art, artistic creative activities, creating a digitalized environment. Taking the human factor as the foundation and driving force to develop and transform other factors.

▪ Implement phase - Level B: gradually forming a clear direction through the experience of each 5-year period of digital transformation. Still based on taking people as the foundation and driving force for development and digital transformation.

▪ Transformation phase - Level C: Performing synchronous digital transformation in the field of fine arts, taking human as the main transformation axis throughout connecting the stages together in a creative free environment with support from the government.

The four main elements of the digital transformation model: Human, Visual Element/Arts, Activities, Environment. They are analyzed and explained in detail as follows:

Digital transformation in human factor by raising awareness of people, artists, designers, employers about the issues of digital arts

The Politburo issued Resolution No. 52 on September 27, 2019, on several guidelines and policies to actively participate in the Fourth Industrial Revolution. Notably (Communist Party of Vietnam, 2019), Decision 749/QD-TTg (June 30, 2020) of the Prime Minister approving the National Digital Transformation Program to 2025, with a vision to 2030 in order to realize the diversified goal of developing Digital government, digital economy, digital society (Ministry of Culture, Sports and Tourism of Vietnam, 2016).

Most importantly, through national management and education and training, Vietnam is undergoing drastic transformation (radical and comprehensive change) to build a generation of students to become global citizens. Decision No. 117/QD-TTg January 25, 2017 of the Prime Minister approving the project "Strengthening the application of information technology in management and supporting activities of teaching-learning, scientific research contribute to improve the quality of education and training in the 2016-2020 period, with a vision to 2025" (Prime Minister of Vietnam, 2020); Create a society-wide consensus on the government's digital transformation strategy.

The Ministry of Education and Training has also set out a strategy to promote and effectively implement digital transformation in education and training in the period of 2021-2025. The Ministry of Education and Training focuses on four basic issues: Developing a data system nationwide on education and training; develop and exploit the system of learning materials and digital learning environment; building and implementing a digital competency framework for high school students; develop highly qualified human resources in the field of information technology and digital transformation. According to statistics of University World News in 2017, Vietnam is in the top 10 in Asia catching up and strongly developing online training. Ambient Insight's data shows that Vietnam's e-learning growth rate ranks the highest, with 44.3%, 4.9% higher than regional countries like Malaysia (Linh, 2020). 100% of educational institutions implement distance learning and teaching, in which pilot training programs allow students to study online at least 20% of the program's content. Implement and apply an educational model integrating STEAM, business, training in English and skills in using digital technology, ensuring safety and network security etc.

Today's universities no longer focus so much on imparting traditional artistic expertise; they enhance the experience for learners through each subject, especially specialized subjects. To partially meet the needs of the market, universities tend to improve its program into a form that is more suitable to the

needs of society and the ever-changing development of technology. Basic art courses, industry foundations as a foundation to maintain artistic quality while integrating additional modules related to Multimedia arts such as advertising film, electronic publishing, design two-dimensional (2D), three-dimensional (3D) etc. supplement the skills of using software application graphics and motion graphics. More and more teaching and learning activities are generating data, and they are interconnected through the internet. Therefore, students can actively access art forum pages and have the orientation of professional lecturers. This ensures that students do not lose their creative direction or have a distorted view of art. Art forums and online communities of artists will help students access and develop art knowledge. It was the Internet that led them to the work of countless world-renowned artists from all levels in the visual arts. Feedback from other artists has been extremely helpful, and through critiques they have helped a lot from minor technical issues to broader issues. Therefore, connecting and taking advantage of Internet utilities to support the universities' training program to enhance the learner's experience should be focused and promoted (Ministry of Culture, Sports and Tourism of Vietnam, 2016). The problem of copyright and work: training institutions are always installed software with the function of recording, checking and monitoring the transmitted data content in order to minimize copyright infringement counterfeit for digitized works. In each major exercise, student's project, there be specific regulations on citation and reference in each stage of the project making process. Thereby, it is possible to limit the "accident" of plagiarism, copying of artworks and piracy of artworks etc. Thanks to these, the artist is liberated.

The transforming human factor through education, training and macro-management policies has diversified the team of domestic artists. Some young artists can be exposed to applying IT into arts creation, able to access and master the field of digital arts quickly. They became the pioneers in the field of digital arts in Vietnam. In addition, there are several middle-aged or elderly painters, with limited foreign language skills and computer graphics, they are still loyal to traditional media but have been raising awareness of the digital transformation process. They began to see the benefits and development direction of applying IT into arts and digital art in the flow of national art. These elderly painters have experience, skills, ideas, art management methods, etc. which are the means to help them assert their values. Most of them become project managers and art directors for young artists.

Digital transformation in visual arts by digitalizing visual elements

Through the process of digitizing the visual elements of traditional painting (points, lines, shapes, colors, etc.), all visual elements in the work are transformed into digital form, right away. Both video and audio are also digitized for creative purposes. Thanks to multimedia utilities, digital artworks become more concrete and vivid. Computers are the main means of reducing the work of artists. Thanks to these, the artist is liberated. However, the convenience of composing using computer graphics has made many artists dependent on computers. They cannot draw without the help of a computer. Works with enough complex effects lose the transparency of the work and can't hide the clumsy compositions, trivial ideas, etc. Therefore, the role of the state in the direction and regulation of the development of digital arts always needs close attention.

In the field of applied arts, digital graphics gradually assert their position. Within digital printing technology, everything that used to be done manually is now fully automated. Computers have also replaced humans in several stages, especially the creation and design, processing, and electronic publishing stages. more attractive thanks to digital technologies. Products of books and magazines are

printed on recycled paper and are also controlled in color in Tipo printing technology. But now, a different face of the market for books and magazines with multi-color offset printing technology is very vivid… Anyone can feel the surprisingly rapid growth of the cultural product market. In Vietnam today, along with online publications, is developing very strongly.

In addition, Digital arts has made an important contribution to the booming digital content industry in the world and has been oriented to develop in Vietnam. Since 2010, the digital arts market has had more than 200 businesses. Enterprises, both private enterprises, and foreign-invested enterprises work in this field, classified by large segments such as design, advertising and communication, printing, etc. nowadays, this number growing rapidly in the national digital transformation strategy in all fields. Digital arts have contributed to the vibrant domestic graphic market. Games technology develops and blooms. Digital artists are also the ones who create an attractive and highly artistic virtual world, the second most important factor in the digital transformation process. Thanks to these activities' environment, the artists are liberated with their digitalized creative tools.

Digital transformation in creative art activities

In the field of visual arts, through the application of information technology in composing, artists satisfy their experience on many materials: application software has become an effective tool to support for artists to create artworks. In the past, artists had to spend a lot of time making sketches. From idea sketches, rough sketches to detailed sketches, color sketches, etc. to get the effect very close to the finished works. Digital arts are a good solution for that experimentation and exploration. Digital arts have also been and is really becoming an "entertainment" of artists. Digital arts are becoming a "close friend", a means of satisfying the experimental and creative aspirations of many young Vietnamese artists today. It affirms its strength in opening unlimited possibilities of creative materials, being close and easy to integrate with the public because it does not delineate the boundary between the concept of scholarly and popular art etc. It is also very easy to get along with the trend of socialization of fine arts… Thanks to these, the artists are liberated.

Like the transformation of the Visual Arts, Applied Arts has also taken a big step forward in the digital transformation process to adapt to modern industrial production conditions and meet the increasingly high and diverse needs of the industry form. Fully exploiting the graphics capabilities of computers, designers can easily build and develop two-dimensional or three-dimensional images, static or dynamic etc.

The product design in the past was mainly based on the feelings of the designer. However, the industrial graphic design process mainly focuses on the elements of mass production, accuracy, and speed in order to save time and reduce product costs… Therefore, the visual elements in traditional arts have been gradually digitized to ensure accuracy and industry standards worldwide. When they are rendered, the product is uniform and accurate on all products. This is a great advantage in modern industrial production. However, it is also a downside of digital design. Currently, there is a risk of forming a generation of "digitized" design artists with emotionless works. They use software to replace creative emotions… Many artists always consider the benefits that computer graphics bring to the creative process with the artist's spontaneous emotions and the computer takes away in the process of performing the work etc. Causing a circumspect mentality when it comes to contact and application with modern science and technology in the creative design process.

Digital transformation in the art media and operating environment

By creating a favorable environment for the development of the internet, since 1997 the internet in Vietnam has paved the way for new media to be born. The artistic environment has also become diverse and rich. In the digital era, the traditional concept of space has been expanded not only to three dimensions (length, width, depth) but has been fully exploited, the fourth dimension - time dimension through animation, even the fifth dimension - the interactive dimension, etc. to have a strong impact on viewers and the public. These dimensions are digitized and become quite new compared to traditional painting.

Moreover, the access to information related to art and art activities in the world through the internet has helped domestic artists gain diverse and up-to-date knowledge about art activities domestic and international. Exchanging experiences, learning, discussing, seminars, art exhibitions, etc. on the internet are also revolutionary trends in art activities. If an artist has an interesting idea or a favorite subject, he can join an internet group and share his views and ideas with others. The Internet has also created a very dynamic market for buying and selling paintings in digital form: Several virtual galleries and personal websites of artists on the internet have been established, making transactions 24/7. Artists can approach the world's art trends directly and proactively. Creating a wave of digital transformation in the art environment, facilitating a new way of receiving art. Through the Internet, artworks can go directly to the recipient. Therefore, art recipients can perceive and evaluate works by their own senses, living capital, and life experiences. Artistic practice has also changed, the public has chosen for themselves their own aesthetic ideal. Thanks to these, the artists are liberated.

Thanks to new means of communication, every citizen has crossed all national borders and thereby has access to all human achievements including art. In other words, the limitations of a country's economic and political context are no longer significant in determining a person's aesthetic conception, understanding of art, skills, and trends in composition or criticism as before. From modern painting schools to Video art, to Installation, Performance art, the organization of promotional events etc. are all present in Vietnam. Nowadays, almost everyone can speak their thoughts, aspirations, and ideas regardless of whether their opinions are accepted by society or not. If not published on the mainstream media, now everyone can write their own blog or use YouTube to share their unique images and ideas. Thanks to these, the artists are liberated.

However, to have a good and safe art communication and operation environment for artists, Vietnam has been rapidly completing the legal framework, protecting intellectual property rights and related rights for artists' works of art: promoting and raising awareness of intellectual property for the cultural and creative industries; strengthen institutional capacity in intellectual property rights protection and strengthen enforcement of intellectual property rights.

Conclusion

In short, the digital era has brought Vietnamese Visual Arts very favorable opportunities in digital transformation to develop to new heights. However, it also poses new challenges. Artists must hone their skills and creativity while also constantly updating with new scientific and technical information to create "aesthetic products" in line with the general movement of arts and humanity's need to enjoy art. Automation and digitalization are one of the important factors of digital transformation and a new trend in the digital era, helping to liberate people in general and artists in particular. It helps artists a

lot in every stage of the creative and design process: from sketching to ideas, searching for information related to people and society in the research process, the presentation of works, displays, exhibitions, etc. are supported by information technology. From the digital transformation model in the field of fine arts, we have analyzed and proposed the above. It is important to start a digital transformation strategy from the smallest steps, not necessarily investing in a large-scale technology transformation project. It can be the digitization of documents to limit paper printing, the digitization of the assignment process, the control of creative and design work with a cloud-based solution… On that basis, thinking about Innovation and digital culture will gradually take shape. At the same time, it will continue to implement other aspects to ensure synchronous and comprehensiveness as the foundation for sustainable development through each stage of synchronous development.

On the path of renewal, industrialization, and modernization of the country, Vietnam today strongly believes in a new generation of artists who are smart, dynamic, creative, and full of confidence. They will be the forces to help the digital transformation in the field of culture and art of Vietnam succeed and create Vietnam's own imprints in the world.

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