

Virtual Exhibition Room in the Pandemic Era

Arsita Pinandita¹, Nofrizaldi², Uzda Nabila Shabiriani³

^{1,2,3}Faculty of Industrial Engineering and Design, Telkom Purwokerto Institute of Technology, Indonesia
arsita@ittelkom-pwt.ac.id, nofrizaldi@ittelkom-pwt.ac.id, uzda@ittelkom-pwt.ac.id

Abstract

The Covid-19 pandemic has changed the various social structures in many aspects of life. All are helpless under their knees to the power of the virus spreads. Rescue activities and adapt to the situation need to be worked with an innovation. Interactive spaces for gathering, such as buying and selling, public activities, and various other public facilities are minimally done by reducing face-to-face contact. Exhibition is the one of activity that is quite important in the creative world and requires direct interaction with many people. Exhibitions that gather large numbers of people are not possible while the pandemic is still ongoing. It is not clear when the pandemic will end, but it requires new creative means in organizing exhibitions. Virtual technology is a way out to bridge new possibilities for physical reality presented by conventional exhibition room. Virtual exhibitions are expected to have the opportunity during this pandemic to maintain the creative process of art enthusiast. The virtual space in the form of an exhibition is also an important part for creators to adapt to their appreciative public.

Keywords

virtual reality; virtual exhibition design; digital media



I. Introduction

The limited space for people's movement during the current pandemic has caused many exhibition activities that invite many people to not be held or delayed. This limitation is felt by artists, designers or people who are engaged in the creative industry, so many choose to hold exhibitions or activities virtually so that they can still work. Visual communication design students are no exception, who also display work assignments through virtual exhibitions. The transformation of the transfer of visual vehicles into virtual forms is one of the strategic efforts to continue to be able to hold exhibitions in the midst of a pandemic and can be one of the markers of the movement of the creative industry that is adaptive to changing times.

Exhibition activities have comprehensive definition, according to Rachmat and Safitri [2017]; art exhibitions are activities that are also carried out by artists to convey their ideas or ideas to the public through a media. In addition, exhibition design is an integrative multidisciplinary process that often combines architecture, interior design, graphic design, interaction design, multimedia, lighting, audio, and other disciplines to create a narrative around a defined theme or topic [Dernie, 2006]. Meanwhile in the current era of Covid-19, when many activities switch to virtual spaces, including exhibitions held online. Effendie [2019] said that a virtual exhibition is a digital replicas collection of real events or objects developed with the help of multimedia and virtual reality tools that produce environmental simulations on computers, and then delivered via the web so that users will get the same satisfaction as advantages. Ciurea [2016] mentioned that virtual exhibitions have several advantages such as the possibility of reuse, minimized security risks for original goods and reduced costs when the exhibition is intended to be held in a different location from the preserved physical objects. Lim and Foo [2003] added that

virtual exhibitions are not limited by physical distance and time, unlike traditional exhibitions.

In general, the exhibitions held by visual communication design students are only to meet the requirements of the lecture exam, but the visual communication design study program at the Telkom Purwokerto Institute of Technology is different. Students are encouraged to display their best works and open up design discourse to the public through exhibitions held open to the public. Not only displaying the work but also being able to represent it through artwork review and discussion so that education and understanding or the work function can be conveyed to the public.

Education is considered to have a very important role in promoting the civilization of a nation. Good quality education can encourage the creation of a quality society, creative and productive until finally able to achieve welfare. Through this national education system, the government should be able to ensure equal distribution of educational opportunities, as well as the relevance and efficiency of education management to face challenges in line with the changing demands of local, national and global life. The budget allocation system for education in Indonesia is heavily influenced by government policies (Saputra, A. 2018). The importance of education is also reflected at MPR No. II/MPR/1993 which states that the national education aims to improve the quality of Indonesia people that is religious people, and pious to God Almighty, noble character, has high personality, discipline, work hard, responsible, independent, smart, healthy, physically and mentally healthy (Sugiharto in Saleh et al, 2020).

With the presence of virtual exhibitions, it can open up great opportunities for audiences who are part of the representation of today's human needs that require a fast flow of information. In the online world, the information needs is largely determined by the internet network by opening the required page view. It is undeniable that many people are currently staring at virtual screens to connect with each other by linking information with one another. The development of communication technology is growing at a rapid rate because internet is considered to be able to meet the rapid needs of information. Thus far the internet has become a medium whose function persists to grow based on how users choose information according to their needs. Statistical data in 2019 showed that internet usage in Indonesia in 2018 was 95.2 million with a total growth of 13.3% from 2017 which was 84 million users. In 2019 the number of internet users reached 12.6% compared to 2018 which was 107.2 million users [katadata.com, 2019]. This data shows that people really take advantage of the internet usage in their lives.

Internet screen displays or websites are also included in the visual communication design knowledge, which relates to the dissemination of information from communicants through communicators, either through messages that can be seen (visual) or through messages that can be heard (audio). Kusrianto [2007] suggested, visual communication design is a discipline that aims to study the communication concepts and creative expressions through various media to convey messages and ideas visually by managing graphic elements in the form of shapes and images, typography and color composition and layout or appearance. Thus, the idea can be accepted by the person or group who is the target recipient of the message.

Virtual exhibitions [Budiyanto, Setiawan and Winansih, 2020] are a collection of imitations in digital form of real events or objects developed using multimedia and virtual reality assistance which produce environmental simulations on a computer delivered through the website, so that users of these imitations get the same satisfaction as seen in real life with a variety of purposes. By doing a virtual exhibition, the works of visual communication design students will get great appreciation from the public. The art

exhibition is one of the important activities for them, which is an applied science of art. By conducting exhibitions, student artworks will get evaluations not only from their own circles but also from the wider community and target audience. With this assessment, students can develop themselves in order to create better works. Aside from being an appreciation room, the exhibition is also a means of promotion for students or universities. The exhibition is also a medium for finding new forms of ideas as well as providing a motivation form or self-confidence for students in dealing with wider audiences.

Based on the problem regarding the need for the availability of virtual exhibition room for Visual Communication design students at IT Telkom Purwokerto, this research will provide ideas as well as design solutions for the virtual exhibition room. This virtual exhibition mostly displays virtual reality with technology utilization that allows users to interact with an environment by a computer simulation [Sihite, Samopa, & Sani, 2013]. Studying the transfer of the exhibition form which was previously a virtual vehicle during this pandemic, it can be an innovation that can be developed in the future. The use of virtual exhibitions indirectly will also provide a wide and unlimited space because every visual form of objects and spaces is designed through the reality of digital illusions.

II. Research Methods

This research was conducted using a qualitative method with a case study approach. Qualitative research according to Pendit [2003] is research by giving careful and detailed attention to matters relating to a phenomenon and treating the phenomenon naturally in accordance with the existing reality. Hennink, et al [2020] says that qualitative research is a general term that includes various techniques and philosophies, so it is not easy to define. In a wider scope of virtual exhibitions, qualitative research is carried out with an approach that allows the audience or the experience of people who are visiting the exhibition room, research methods are carried out in various ways, such as in-depth interviews, focus group discussions, observation, content analysis, and various visual studies.

In addition, this research is also the development object of the virtual exhibition content itself. One type of research development is research and development, Sugiyono [2013] describes 10 stages of development in research and development, namely (1) potential and problem analysis, (2) data collection, (3) product design, (4) design validation, (5) design revisions, (6) product trials, (7) product revisions, (8) usage trials, (9) product revisions, and (10) mass production. The researcher uses the research and development model from Sugiyono [2013] because the procedure is clear and thorough. Even at each stage the researcher must do the test and often make revisions.

However, this research will simplify those stages into four, not to product revisions and extensive (mass) duplication planning. Because of the aim of this research is to determine the audience eligibility to use virtual exhibition rooms. The four stages are: (1) Design, (2) Material Collection, (3) Manufacture, (4) Testing.

III. Results and Discussion

Art galleries as exhibition spaces have various functions if it is linked in the context of the space (media) for the artwork itself. Art gallery is a place to exhibit 2D and 3D artworks that continue to develop so far and become contemporary art. Apart from being a place to exhibit artworks, caring for, maintaining and appreciating art galleries and developing contemporary art. To support this, additional facilities for exhibitions are needed, but there are also places for appreciation, recreation and

contemporary art development, in addition to management and performance facilities that support the main activities [Sari, 2012].

The space section of an art gallery in a virtual exhibition is a relatively small area of the real world. In this case, some form of interaction mechanism is needed to move the audience or exhibition visitors when exploring the virtual world. The interaction mechanism that moves the user in this way is called locomotion. It is as if the user is tracing a controlled virtual vehicle through a virtual world. Meanwhile, Ciurea [2016] mentions the most important characteristics of virtual exhibitions are as follows: 1) virtual exhibitions can replace physical guides of real exhibitions, meaning that they represent a substitute for catalogs that describe collections; 2) virtual exhibitions may include multimedia content, such as videos, animations, dynamic galleries, which show that the virtual exhibition is not just a simple image gallery or website for the presentation of cultural heritage collections; 3) virtual exhibitions can be implemented as native mobile applications that expand the possibilities for creating cultural heritage collections accessible on mobile devices, such as smartphones and tablets. Considering the statement, virtual exhibition is a concept that has acquired new meaning along with the evolution of modern information and communication technology. The difference between online and virtual exhibitions is very thin. All virtual exhibitions are online exhibitions but not the other way around. Usually all virtual exhibitions will provide simulations of real environments using virtual reality tools which are slightly more difficult, expensive and time consuming to develop than simple online exhibits. Unlike traditional exhibitions, these exhibitions can be viewed free of charge, at their own convenience and time zone [Khoon and Ramaiah, 2008].

3.1 Design Concept

The virtual exhibition room concept created has a modern theme with the output of applications that can be installed on each user's android smartphone. This application is called DKV Virtual Toure, which is given to explain the purpose of this research to designing a virtual exhibition room in the pandemic era that can exhibit works digitally. This was created as an alternative media that is more interactive for students to show their artworks and users can feel the atmosphere of the exhibition room like in the real world.

There are three software used to create this application of virtual exhibition room, namely (1) Blender; it used for making the 3D modelling of the elements or objects or the visual of virtual exhibition room. (2) Miamo; it used to provide animation (rigging) on 3D characters that have been designed. (3) Unity; A game engine software, it is used to make the entire programming of the virtual exhibition application and develop it into apk form.

3.2 Exhibition Room Design

a. Design

Design a rough sketch of the virtual exhibition room to be made in 3D. The concept is modern with the outdoor feel is designed when visitors come to the exhibition room and they will come to see the surrounding atmosphere filled with shady plants and beautiful scenery. This is an implementation of magnified virtual reality (hyperrealist) in order to maximize visitors' impression of the virtual mode. Hyperrealist creates a condition in which falsehood mingles with authenticity; the past mingles with the present; facts are confused with engineering; sign merges with reality; lie is compounded with truth. Hyperrealist accepts the radical consequences of what it sees embedded in the modern

'code'. This code is clearly related to computerization and digitization; this code can bypass something real and open up opportunities for the emergence of a reality called hyperrealist. In addition, the space in the exhibition is designed by creating interconnected spaces such as a large gallery which has many elongated white aisles. The viewing angle between the works and the height of the exhibition walls is designed not too far away; this is to make it easier for visitors to enjoy visual works in the gallery.

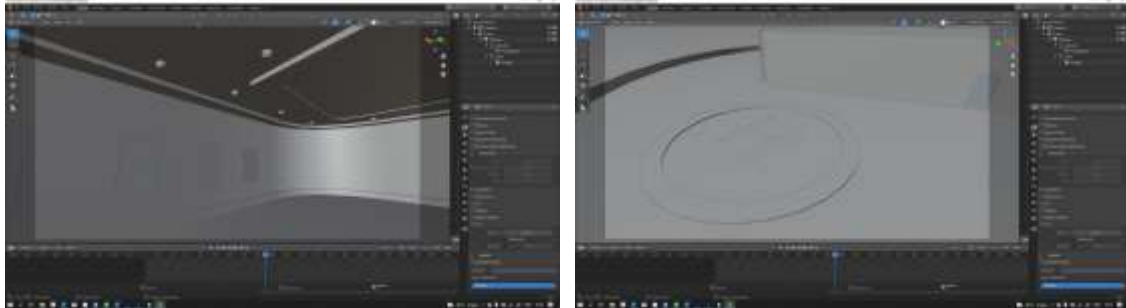


Figure 1. Designing virtual exhibition space properties

b. Material Collecting

At this stage, it is carried out to collect materials used for the creation of a virtual exhibition room. Work simulations exhibited in the virtual exhibition room are the students' work of the visual communication design study program from various design and art competitions as well as from various subjects, such as sketches, mode and aesthetics, illustration, basic typography, design studio and photography. This can accommodate 20 selected artworks.

c. Making (Assembly)

At this stage, a mobile-based virtual exhibition room application design from several materials that have previously been created and collected. This uses software that has been integrated with android support so users can feel the atmosphere of this virtual exhibition space optimally. Some of the artworks that have been collected and selected are placed on the walls of the virtual exhibition room. This application is designed looks like an online game and users can only be used it when the internet is active. Users can choose a character according to the imagined shape. The form of online game has been characterized as a symbol of postmodernity in the form of simulacra, both as a form of digital media and in terms of digital localization, which creates user fantasies that are not associated with an authentic or genuine world/nature [Brignall and Van Valey, 2007]. On the other hand, the concept of virtual community, fantasy role-playing video games online is one of the most popular texts imagined in a real way [Clegg, 1991]. It considers to the simulation concept through an examination of the ways in these digitally created contours are constructed on virtual exhibitions.

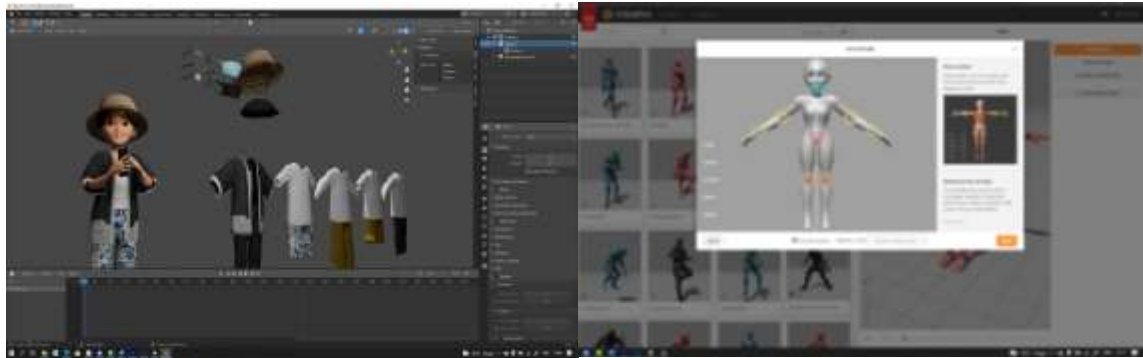


Figure 2. *Creating a Virtual Exhibition Visitor Character*

d. Testing

The application that has been made is tested on students and lecturers of the Visual Communication Design study program. The trial was carried out to ensure that the application could run according to the design concept and received input from the test target regarding the shortcomings of the virtual exhibition space application to make it better.

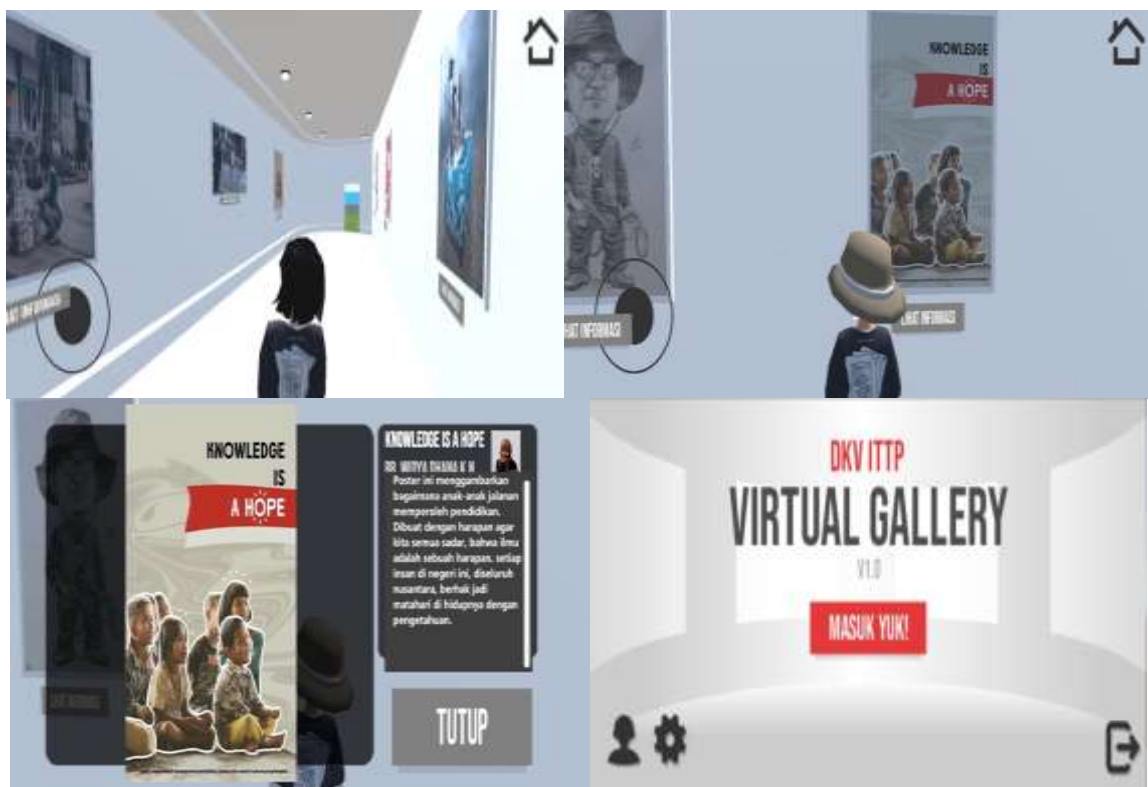


Figure 3. *Virtual Exhibition Visitor Atmosphere and Interaction*

IV. Conclusion

The exhibition room is very important for the Visual Communication Design study program because it has various functions. The exhibition room, apart from functioning as a means of appreciation, is also a space that can give students confidence in their works. The form of virtual reality-based exhibition space can be a new experience for audiences and connoisseurs of DKV works. Usually exhibition visitors who are used to appreciating exhibitions monotonously can now experience a new entry into virtual reality without losing its main essence, namely enjoying and appreciating DKV works.

The presence of a virtual exhibition can create various possibilities to explore new realities without the boundaries of space and time. The blurring of the original reality in the virtual exhibition room has resulted in the reproduction of signs, thus creating a 'virtual' pseudo-identity which eventually becomes a marker in the digital era that is able to adapt to the covid pandemic. The wide reach of space and time eventually also makes virtual exhibitions more interactive as well as interesting for both creators and visitors to the exhibition. As for suggestions for the development of the next virtual exhibition, namely by increasing the number and classification of types of existing DKV works and increasing the quality resolution of video-based DKV works as well as aligning the movement of visitors' characters with the exhibition room and having a more user friendly display.

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