

# Analysis of User Experience in Virtual Art Exhibition During Pandemic

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## ABSTRACT

Since its first emersion, Virtual Exhibition is considered to be a potential medium to exhibits Art and art education because of its ability to reach art enthusiasts as well as people who do not have access to visit galleries or exhibitions physically. Based on research that has been done on the potential of the Virtual Exhibition, there are still fundamental problems that have not been resolved. In Indonesia, a virtual exhibition was recently known and discovered since the emerge of the Covid-19 pandemic which also affected the art ecosystem. Virtual Exhibition encourages the art ecosystem to keep running with all its limitations. This research uses the interview method along with artists and exhibitors, questionnaires for art enthusiast, and a comparison of three Visual Exhibition was held recently by the art community, government as well as educational institutions. The objective of this research is to giving clear perspectives of experiences in a virtual art exhibition as an alternative art space during pandemic COVID-19 to all groups of society.

**Keywords:** *User experience, Virtual exhibition, Gallery, Art Space, Pandemic.*

## 1. VIRTUAL EXHIBITION DURING THE PANDEMIC

Exhibition in an art ecosystem can be interpreted as an activity that combines art and visitors in the gallery. Visitors in the gallery are open to all groups of people, therefore, resulting in exhibitions to always offer new concepts and forms. Usually, galleries are designed with interiors that are predominantly white with separated partitions and silent environments this acts to separate the works of art itself from the everyday world by cutting the relationship between the gallery and the outside world [1]. This isolated experience allows visitors to enjoy works of art individually, using all senses.

In the early virtual exhibition in the 1990s, it has experienced rapid development. This development occurs because of the support of technology and information that is gradually being developed. According to Foo, artworks on a virtual exhibition that are being displayed are the results of digitalization scanning through a 2D or 3D rendering process, then combined into a virtual platform that can be accessed by visitors simultaneously [2].

Since the first case of Covid-19 detected in Indonesia in early March 2020, various sectors of the creative economy have been affected. In a press release on April 12th, 2020, the Ministry of Tourism and Creative Economy stated that there were 226,586 cases of affected workers in the field of arts and creative workers across the 34 provinces in Indonesia [3]. The implementation of large-scale social restrictions (LSSR) means that art exhibitions cannot be carried out physically. Art workers and exhibition organizers must find alternative spaces that can be used as an exhibition venue, which can bring the public meets the artworks. With all the limitations, the spirit of collaboration encourages the emergence of various virtual exhibitions from various regions in Indonesia. At first, art exhibitions could only be held in specific spaces and places, nowadays it can be held and visited by a wider range of people.

The virtual exhibition achieved a warm welcome by art enthusiasts in Indonesia. Based on questionnaires to 87 respondents who have visited the virtual exhibition, 94.25% gave a positive response to the presence of a virtual exhibition. Through the virtual exhibition, art visitors can enjoy exhibitions without the limitations of space and time. Commonly visitors with

adequate internet access and gadgets can visit the virtual exhibition wherever it is being held at. However, not many Indonesians have easy access to the internet and devices. Based on the reports by We Are Social, out of 272.1 million internet users in Indonesia or other words 64% of the population of Indonesia use the internet [4]. In theory, community groups with internet access have the opportunity to be able to visit the virtual exhibition, a bit in fact only some people have excessive motivation to visit virtual exhibitions [5].

A virtual Exhibition or online exhibition can be interpreted as an online platform that showcases artworks digitally. The virtual exhibition can be designed in various forms by utilizing technology and the internet. A virtual exhibition portrays a way out to present a collection of artworks or artifacts that do not depend on time, distance, and space unlike art galleries or museums in general. Although a virtual exhibition has long been questioned for its ability to provide real experiences in observes the atmosphere, through the virtual exhibition people can have the opportunity to understand and learn about the work of art easily compared to a physical exhibition [2].

## **2. TERMS AND EXPERIENCE OF THE ART EXHIBITION**

### ***2.1. Terms of Art Exhibition***

The exhibition term indicates an event with a specific place and time during which the public can enjoy a range of objects, paper or multimedia, books, paintings, sculptures, and other objects linked together and organized according to logical criteria, thematic, space, history and made available permanently or temporarily by one or more narrative routes and having a scientific, educational and/or promotional objective. [6]

Whether by direct involvement or with a didactic intent, many art collections are fundamentally engaged with education from their earliest incarnations. An exhibition is a great deal. It allows the visitor greater freedom to edit or direct experience than is allowed by a text or book. Visitor can choose their own entry and exit points, for instance, rushing through the first few rooms of the exhibition to concentrate on later works. People sometimes buy a ticket to an exhibition to see a particular artwork, which is one of many – and they may take away more from the experience of looking than from reading any text. [7].

The art exhibition is closely related to two things, work, and space. Although in Indonesia exhibitions are presented in a variety of spaces, generally exhibitions are presented in closed spaces. In the gallery visitor can have physical encounter with space and intangible/ tangible object as their choosing. The term gallery is used to

describe any space of the exhibition, while the art museum has a specific requirement collection hold by institutions. The gallery is designed to allow art total separation from the everyday. This isolated experience where the individual, even when companies by another person experiences an individual artwork in isolation [1]

### ***2.2. Users Experience in Virtual Exhibition***

A virtual exhibition called as digital hypermedia objects when meets these following conditions:

1. Produced by interdisciplinary topic, concept, idea;
2. Assets are presented digitally in 2D or/and 3D;
3. Occasionally are stored in distribution channels or platforms;
4. Utilize modern technology to giving new experience and accessible to the public [8]

While virtual exhibition hardly replaces the emotional and sensory interaction in the physical exhibition, the virtual exhibition has additional values:

1. People able to access the information from their personal computer or smartphone, everywhere and anytime;
2. The user could explore the exhibition freely and browse and choose content as their needs;
3. The virtual exhibition is able to be saved and stored digitally;
4. Have the flexibility to interconnect with other virtual exhibitions or other external sites. [8]

Otherwise, as a product of interaction design, virtual exhibitions have to be usable. To be usable, the product should follow these criteria:

1. Usefulness. A virtual exhibition should meet the visitor's goals for example browse art information and see the artworks. Also, fulfill the artist's needs to bring the people to showing appreciation for their artworks.
2. Efficiency. A measure of how long the user can achieve and complete their visit. It also can measure the efficiency of the exhibition organizer's side view.
3. Effectiveness. This refers to how the virtual exhibition able to provides and behave as users' expected.
4. Learnability. Learnability is related to what specific skills do they need to have. To operate all the features in a virtual exhibition, designers need to take the user's ability into consideration.

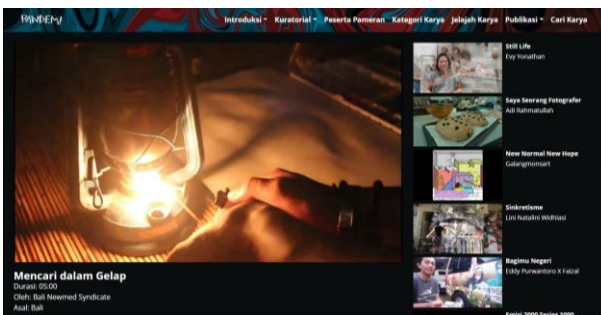
5. Satisfaction. It refers to the user's perception, feeling, and opinion based on their experience when they'd visit the virtual exhibition.
6. Accessible. it about having access to the virtual exhibition. [9]

### 3. METHODS AND MATERIALS

#### 3.1. Related Work

Since the implementation of LSSR and Physical Distancing, quite a lot has demanded the art ecosystem to find solutions so that it can keep moving amidst its limitations. This makes virtual exhibitions one of the solutions taken. Eventually, virtual exhibitions were not only carried out by established art institutions or organizations but began to be carried out sporadically by independent communities in various regions in Indonesia. This exhibition marks how the art ecosystem collaboratively strives to stay survive.

In this study, 3 virtual exhibition forms were selected from 3 exhibition organizers. (1) Manifesto # 7: Pandemic, organized by the National Gallery of Indonesia and the Ministry of Education and Culture, (2) Meretas Batas, organized by Gudskul Ekosistem and Serrum Art Handling, (3) Tjaptijar, organized by Nusakara Artspace a gallery of the Faculty of Art and Design, Universitas Multimedia Nusantara. These three virtual exhibitions represent government institutions, art communities, and educational institutions.



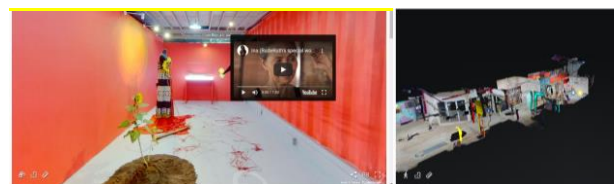
**Figure 1** Artist’s presentation page on Manifesto #7 Virtual exhibition website [10]

This virtual exhibition organized by the Galeri Nasional presents more than 200 artists from various regions in Indonesia. These artists use video as a medium for their work. Manifesto # 7 uses the website as its main platform. Exhibition visitors can access <https://galnasonline.id/j Explorer-karya> and will go directly to the home page. Works displayed on the ‘Jelajah Karya’ page are displayed in a modular display. Works that are arranged randomly and will always change every time visitors enter the ‘Jelajah Karya’ page. Visitors can choose 1 work from several works displayed on this page and will enter the video work page. Although this website always provides limited choices on one page,

visitors can go to the exhibitor’s directory page, which is sorted alphabetically by name. This exhibition displays hundreds of video works from various artists. what he is concerned about how this exhibition presents art by showing a list of the artists involved. This allows users to choose the work they want to see based on the artist's name, not by their work, while, physical exhibition, let the visitors get amazed by the artwork, then visitors will find out who made it, what materials were used, and how do they execute it. [11]

The website is also used by Gudskul to present a virtual exhibition entitled Meretas Batas. What's different from Meretas Batas is the use of a digital simulation space resulting from photography using a 360 camera. It is the same with the concept of 'street view' on Google Maps & Google Arts & Culture. Technically, this virtual exhibition is a duplication of a physical exhibition by photographing the exhibition space and transforming it into 3D digital rendering. In other words, this technique can only be applied by construct a physical exhibition.

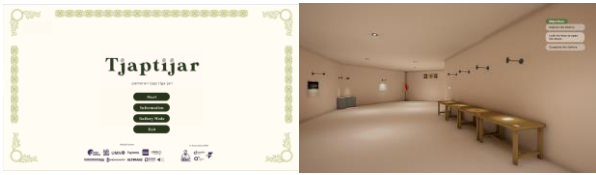
Rifandi Nugroho, an archival artist, tended to give up his intention to exhibit his works because of large-scale social restrictions, but at that moment, Serrum Arthandling offered to facilitate virtual exhibitions using a 360 camera. Shifting from physical exhibition to virtual made the methods needed adjustment here and there. The composition of works follows the principles of photography, and also required different lighting condition. From an archiving point of view, virtual exhibitions have no time limits, it would still have traces to be accessed through digital platforms. Its digital form does not mean that the construction process is more efficient, there are many parties involved which are not efficient, and fill with artificial touches. Organizing exhibitions usually depends on established spaces, in certain spaces that have exclusive access. But producing virtual exhibitions is neither easy nor affordable. [11]



**Figure 2** Meretas Batas Virtual Exhibition using 360 camera to capture the existing physical exhibition and convert to 3D rendering. [12]

Unlike the two previous virtual exhibitions, Galeri FSD and GDC pack a virtual exhibition using a personal computer game approach. The environment and assets in this game are made in 3D. The artworks in this game are digital works such as film and 3D mockups, and some artworks are digitized from physical artworks. To be able to visit the exhibition, visitors must download the game

and install it on the PC. In this game, visitors are asked to complete the given task, which is to find and place works in the space provided. With this task, visitors will explore this virtual space and see the works in this game.



**Figure 3** Tjaptijjar Student's virtual exhibition presents through computer game simulation. [13]

According to the Gelar, the activity of exhibiting works has been started for a long time, since many digital platforms allow users to upload audiovisuals. Just because the activity is not sacred and is claimed as an activity at the specified time and place, it is not categorized as exhibition activity. However, the virtual exhibition becomes a trend in Indonesia because simply technology follows human movements and needs. Including when exhibitions are physically impossible to do, the need for virtual space is demanded. The advantage of virtual exhibitions is that information can be absorbed more freely as art education, but the disadvantage is that there is no interaction with visitors, artists, or art organizers. The virtual exhibition which Gelar attends lately was Tjaptijjar. A virtual exhibition which was presented through gamification. Virtual exhibition in form of games such as the exhibition "Tjaptijjar" is very interesting because the approach, enables users to get new experiences. [14]

**Table 1.** Usability Analysis of Virtual Exhibition

UX Principles	Virtual Exhibiton
1. Useful	Present the artwork to public anytime and everywhere
2. Efficient	User spent less than 10 minutes in webiste platforms, while user as game player need more time to completed all the task given.
3. Effective	In VE users hardly interacts with the artworks. Users unable to enjoy the real experience of visiting art exhibition as it should be
4. Learnability	For some users who using technology devices in daily basis able to explore the virtual exhibition without any constraints.

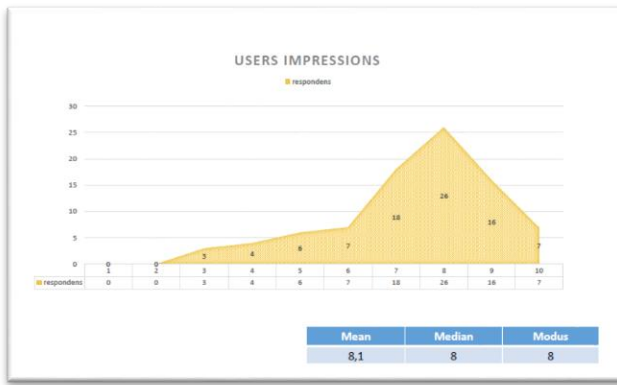
5. Satisfaction	VE giving new experience for visiting art exhibition and make good impression, but over all, people do not satisfied with virtual exhibition
6. Accesibility	As virtual, VE need platform, devices, and internet connection to be accessed.

The virtual exhibition cannot replace the presence of a physical exhibition. As long as the conventional art generation is still alive, a virtual exhibition can only be an alternative to the form of an exhibition. In terms of infrastructure, virtual exhibitions fall into the education category, as long as the government has not paid attention to the provision of infrastructure that makes this virtual exhibition easy to access, the existence of virtual exhibitions cannot be maximized. Although, in terms of human resources and technology, virtual exhibitions have a lot of potentials to be developed, such as in the form of digital games, online catalogs, and 360 cameras, which make each visitor get a different experience

### 3.2. Virtual Exhibition User's Impressions

The purpose of the questionnaire itself is to find out the point views and experiences of respondents regarding art exhibitions in Indonesia. This questionnaire does not have an age limit but targets groups of people who have been visited art exhibitions in the last two years. This questionnaire used non-random sampling to 100 respondents consisting of exhibitions visitors, the artist as well as people with a fairly wide age range between 18-40 years. On this research focused only for respondents were have been experience virtual exhibition. Until this stage, the respondents who had visited the virtual exhibition were 87 respondents.

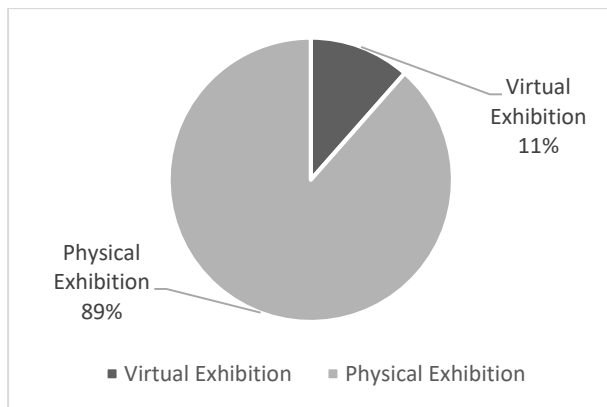
When visiting art exhibitions, visitors have different experiences and impressions. These are, the main reasons visitors enjoyed the physical exhibition. First, the ability to observe the artworks in detail. Second, exhibition space is designed in such a way to ensure that visitors can experience the atmosphere during their visit. In addition, interaction with works is the third most common reason. Then it's followed by taking pictures and greeting the artists in person and interacts with new people. Out of 100 respondents, 62% have been to a virtual exhibition and 38% have never visited a virtual exhibition before.



**Figure 4** Respondents has positive impressions according to their experiences in virtual exhibition.

87 of 100 respondents who had seen a virtual exhibition, they gave quite a positive impression, specifically 74%. Most of the respondents appreciated the engaging exhibition approach by utilizing technology. Some comments concerned on a few things from visiting physical exhibitions that were not obtained through virtual exhibitions, including:

1. Unable to perceive and respond to the exhibition atmosphere.
2. There is a boundary between art works and the visitors through the screen
3. Lack of interaction and physical experience
4. The details (shape, texture, colors, etc.) of the artwork decrease.



**Figure 5** The art exhibition model preferences.

Based on these impressions, 88.5% choose physical exhibitions over virtual exhibitions. They acknowledge that virtual exhibitions exist as an alternative to art exhibitions whose innovations arise from a response to demand due to pandemic conditions that have an impact on the art ecosystem.

### 3.3 The Potentials of Virtual Exhibition

Based on data collection, it can be understood that virtual exhibitions hold a lot of potentials that can be developed to support the art ecosystem in Indonesia. The initial motivation for holding a virtual exhibition was very diverse. The spirit of collaboration that occurs in small art communities in Indonesia has made virtual exhibitions present sporadically. This shows that virtual exhibitions are used as an alternative means amidst limitations.

One of the advantages of a virtual exhibition is that it presents an exhibition that can be reached by all groups in various regions at any time. So far, art exhibitions have an exclusive impression and are only for certain groups. Through a virtual exhibition, Art becomes very easy to reach. In his interview, Gelar said that the most important thing in introducing art to the public is by providing an exhibition that is accessible to all groups of people so that they can have the experience of attending an art exhibition. Various approaches can be taken to attract the attention of the general public to be engaged.

The virtual exhibition is generally presented using the website. This kind of exhibition can be stored in a virtual form for documentation purposes. The public can use virtual exhibitions as resources for learning fine arts and performing arts which are currently happening in Indonesia. Artwork curatorial contained in a virtual exhibition should have an information value that exceeds a physical exhibition. This allows people to learn about the background of the artist, the concept of the work, the production process, the materials used, and so on through a virtual platform. With this function, the virtual exhibition becomes an extension of conventional exhibitions.

It is undeniable that the pandemic has had a significant influence in changing the way artists perceive. However, in the presence or absence of a COVID-19, the virtual form obviously cannot replace experiences that occur in the real world. On the other hand, virtual exhibitions are designed to be able to present new experiences in enjoying art. The interactions that occur in art space and virtual spaces are may be varied. Virtual interactions can be developed using a gamification approach. That allows people to interact with works of art in different ways. Things that can be done with gamification are accomplishing tasks, interacting with other users, appreciating works of art by giving emojis or digital stickers, sharing to social media, and adding storytelling in them.

The virtual exhibition can revive the art business ecosystem in Indonesia. A virtual exhibition in Indonesia is still used as a duplication of the physical exhibition. In fact, the ability of a virtual exhibition to gather people around the world will open up opportunities for trading or auction among artworks.

Until now, several artworks have been exhibited in virtual exhibitions, most of which are audiovisual. The potential that VE has is to present performing arts such as theater or concerts. Presenting performing arts through virtual has a unique challenge, but it can bring fans to meet, interact, and respond to their musician performance virtually.

### **3.4 The Limitation of Virtual Exhibition**

As a new entity in Indonesia, virtual exhibitions have many unique potentials that can be further developed. However, there are several obstacles to the virtual exhibition. These obstacles can be categorized based on technical and experience.

The technical barriers that exist in virtual exhibitions in Indonesia are:

1. Requires a team with sufficient skill specifications and technological understanding;
2. The process of converting physical works to digital has decreased the quality of both shapes, colors, textures, and so on;
3. It is hard to present humanist interactions in a virtual exhibition;
4. Requires technological equipment such as computers with certain specifications, special cameras, including storage systems that are connected to the internet;

Apart from technical obstacles, there are also obstacles related to user experience in visiting virtual exhibitions, particularly:

1. Limited observation of artworks;
2. The only interaction that occurs in the virtual exhibition is a 'click' or tap on the screen;
3. Does not involve the five senses in responding to the virtual exhibition space. Feelings, emotions, and sensory experiences do not occur virtually. In a physical exhibition, people attend consciously, with the motivation and purpose to enjoy the exhibition with all their sensory senses;

## **4. CONCLUSION**

Virtual exhibitions have been around for a long time, and since then the form of virtual exhibitions has continued to evolve. Since its inception, the virtual exhibition has been considered to have the potential to present works and artifacts in digital form. Information on works can be accessed anytime and anywhere. At the beginning of 2020, a virtual exhibition suddenly appeared in Indonesian society in the midst of the Covid-19 pandemic. The existence of large-scale social restrictions

has a big impact on the art ecosystem. Not a few artists and exhibition organizers are threatened with canceling their exhibitions. All these limitations, which encourage artists to find alternative ways to keep the exhibition running. The alternative exhibition used is virtual exhibition. However, for a long time researchers have paid more attention to the weaknesses that virtual exhibition has, which until now has not been resolved. This weakness is the loss of visitor interaction with the artwork displayed.

The exhibition both in galleries and museums as a medium of information and art education for the public. Unfortunately, for various reasons, not many people visit galleries or museums or art exhibitions. Virtual exhibition comes with a digital platform that can embrace all people in Indonesia, regardless of distance and time.

Virtual exhibitions in Indonesia are still open with further developments related to user experience, information media design, and the development of a wider range of art content

## **ACKNOWLEDGMENTS**

This research is part of Virtual Exhibition project led by Bardha and supported by Retas dari Rumah a Hackathon held by HONF & SDI. Also, The Authors would like to thank to all contributors for their insights to the research process.

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