

# Virtual Art Exhibition to Encourage Traditional Culture Knowledge for Generation-Z

Andreas Kurniawan<sup>1\*</sup>

<sup>1</sup>Creative Advertising Program, Visual Communication Design Department, School of Design, Bina Nusantara University Jakarta, Indonesia 11480

**Abstract.** Indonesia as a country that has a lot of traditional cultures, requires attention especially among generation-Z to maintain its sustainability. In many cases, various Indonesian cultures are often claimed by other countries as part of their culture, sometimes for the political purposes, economic, or even industrial motives. Thus, it is important to introduce and strengthen the traditional cultures knowledge, especially to generation-Z as the nation's successors. This study was conducted by creating a virtual gallery exhibition as a manifestation of new media forms that can adapt to the trends from generation-Z. The virtual gallery contains traditional attractions, culinary, dance, tourism, music, folklores, and ethnic houses. Some contents in this virtual gallery applies augmented reality technology with image tracking based. This research used mix method with qualitative and quantitative approach to explore the generation-Z expression. Results, virtual gallery gives an effective penetration to increase the traditional culture knowledge among generation-Z.

## 1 Introduction

Indonesia, the world's fourth most populous nation, is separated by seas and clustered on some islands. Ethnically the country is highly diverse, with more than 500 languages and dialects. This fact as indicator that Indonesia has so many traditional cultures, including traditional attractions, culinary, dance, tourism, music, folklores, and ethnic houses. Indonesia with its diverse cultural heritage, requires real action that can have a direct impact to generation-Z awareness. Furthermore, this is also an important mission from the world organization 'UNESCO', to participate in preserving the world's cultural heritage [1].

Traditional culture as the main identity from Indonesians, is important to be maintained and preserved, based on several cases, other countries claimed Indonesian culture as part of their culture, sometimes for the political purposes, economic, or even industrial motives [2]. In addition, the COVID-19 pandemic has also had a significant negative impact, especially for culture studies to generation-Z, due to the difficulty of bringing students to specific places where traditional culture is located [3].

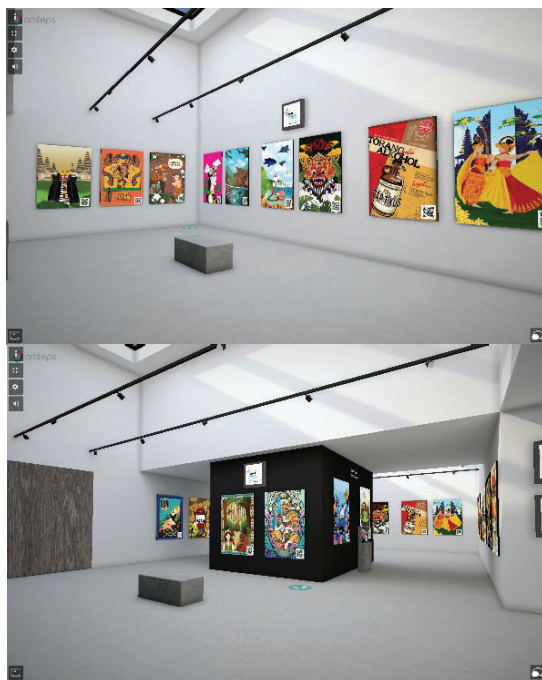
### 1.1 Objectives

Indonesia, with so many distinct cultures, poses challenges to the community's cultural learning. Based on the underlying problem that culture knowledge is very significant as a national identity, the goal of this study was to explore new media that can be utilized as a

stimulus to promote and conserve traditional culture, particularly among generation-Z. Furthermore, this research provides virtual art and design exhibitions approach, which involve students from universities to create works of art and design with Indonesian traditional cultural themes, but in various forms of digital media. This exhibition is designed to be watched online, which makes it seem as if audiences are visiting a real gallery. At the other hand, Indonesia is also one of the countries that has many social media users in the world, and the netizens often share digital content on their social media platforms [4, 5]. Based on Indonesian statistical data, generation-Z is people aged 8-23 years, who have a tendency to be active in using the internet and digital media [6].

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\* Corresponding author: [andreas.kurniawan@binus.ac.id](mailto:andreas.kurniawan@binus.ac.id)



**Fig. 1.** Beyond Reality - Virtual exhibition

In this research, as shown in Figure 1, the exhibition called “Beyond Reality 2021” brings a variety of Indonesian cultures, several stories from various regions in Indonesia are manifested in art posters, and each poster has a description which explains the concept and story of the artwork [7]. The virtual gallery created using the ‘Artsteps’ application which is integrated in the university website, Artsteps is an online application service providers to create virtual exhibitions [8]. Furthermore, some posters in this gallery have content with augmented reality (AR) technology by image tracking based, thus requiring audiences to use two devices to explore the gallery, the first device as an image trigger, and the second device as a content reader. Augmented reality is an interactive experience technology with combining system between virtual content such as images, video, and audio to real-world environment [9], with augmented reality as a medium, this technology could increase awareness, engagement, and create an emotional connection [10,11]. In this study, students used the Zappar Studio as a software to create augmented reality content poster [12].

**Table 1.** Virtual art and design exhibition - Beyond Reality contents

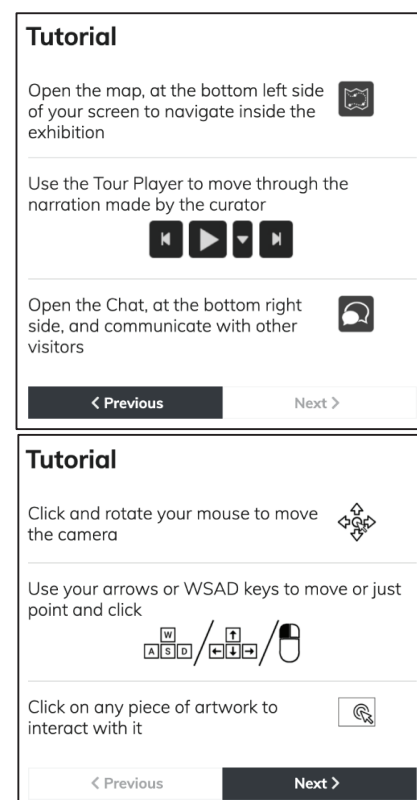
Culture Categories	Number of works
Traditional Attractions	23
Traditional Culinary	12
Traditional Dance	8
Tourism Areas	10
Traditional Musical Instrument	2
Traditional Songs	4
Traditional Folklore	4
Ethnic Houses	11

Based on Table 1, this virtual exhibition has a variety of diverse pieces from each category. However, rather than

being specific to any one category, this study focuses on traditional cultural knowledge in general.

## 2 Literature Review

Previously, research conducted by Sugiarto has explained that virtual galleries can increase appreciation of artworks [13]. The other study from Carrozzino, has explained the relation between virtual gallery technology with cultural theme contents, the research provides virtual gallery combined with text description, audio narration, and human with virtual form to help explaining every art objects, and the result, this technology significantly can improve the learning process and delivery of information [14]. In contrast to the previous research which had audio narration and human with virtual form during the exhibition, this study provides all kinds of information based on simple text instructions from Artsteps standard.



**Fig. 2.** Artsteps instruction

As shown in Figure 2, these instructions can be found on the screen by the user during visiting this virtual exhibition, a map is provided to help users better comprehend the locations of the many locations where artworks are located, in addition, there is a mechanism to use a keyboard or mouse to access the exhibition.

## 3 Research Method

This study aims to examine virtual art exhibition as a medium to encourage traditional culture knowledge for generation-Z, but because people generally have

different levels of knowledge, then this study was conducted using a mix method to test the validity and reliability data from each participant, a qualitative approach with simple interviews, and a quantitative approach with questionnaire about their experiences after visiting the exhibition. According to Moleong, interview means a conversation with a specific purpose, which is carried out by both parties, the interviewer who asks questions, and the informant who provide answers the questions [15], in this study, interviews were conducted to 7 students who created the augmented reality poster.

#### 4 Data Collection

A quantitative approach was conducted on 87 participants who visited the exhibition, the average age was 21,32 years old, and every participant answered 5 statements with Likert scale.

Q1. I have understood traditional cultures from various regions in Indonesia. Q2. I think the Beyond Reality Exhibition is clearly accessible and easy to understand. Q3. After visiting the Beyond Reality Exhibition, I got an interesting experience to learn about cultures from various regions in Indonesia. Q4. After visiting the Beyond Reality Exhibition, I feel that I have learned a lot about cultures from various regions in Indonesia. Q5. I think the Beyond Reality Exhibition needs to be continued in the future to encourage knowledge of traditional culture among generation-Z. By using interval formula, Likert scale distributed to the following description:

**Table 2.** Likert scale interpretation

Score	Categories
1,0 - 1,8	Strongly Disagree
1,8 - 2,6	Disagree
2,6 - 3,4	Neither
3,4 - 4,2	Agree
4,2 - 5,0	Strongly Agree

Based on Table 2, each level has an interval of 0.8 points, thus providing accurate results in data interpretation.

#### 5 Results and Discussion

Based on the interview, generally, each informant claimed that they had learned a lot of new cultures after visiting the Beyond Reality - virtual art and design gallery. Furthermore, the informants said, they had understood the traditional cultures especially which come from their hometown, or that culture is quite common in society, while for cultures that are not from the area where they live, they learned it from this virtual gallery, especially in the categories of traditional attractions, traditional dances, and ethnic houses. The virtual gallery with augmented reality also attracts attention and increases the curiosity from informants.

#### 5.1 Numerical Results

**Table 3.** Pearson correlations test

		Q1	Q2	Q3	Q4	Q5	Total
Q1	Pearson Correlation	1	-.058	-.013	-.044	-.128	.193
	Sig. (2-tailed)		.596	.906	.685	.238	.074
	N	87	87	87	87	87	87
Q2	Pearson Correlation	-.058	1	.258*	.227*	.100	.494**
	Sig. (2-tailed)	.596		.016	.034	.359	.000
	N	87	87	87	87	87	87
Q3	Pearson Correlation	-.013	.258*	1	.884**	.765**	.892**
	Sig. (2-tailed)	.906	.016		.000	.000	.000
	N	87	87	87	87	87	87
Q4	Pearson Correlation	-.044	.227*	.884**	1	.816**	.888**
	Sig. (2-tailed)	.685	.034	.000		.000	.000
	N	87	87	87	87	87	87
Q5	Pearson Correlation	-.128	.100	.765**	.816**	1	.789**
	Sig. (2-tailed)	.238	.359	.000	.000		.000
	N	87	87	87	87	87	87
Total	Pearson Correlation	.193	.494**	.892**	.888**	.789**	1
	Sig. (2-tailed)	.074	.000	.000	.000	.000	
	N	87	87	87	87	87	87

\* Correlation is significant at the 0.05 level (2-tailed)  
 \*\* Correlation is significant at the 0.01 level (2-tailed).

The result is then represented on Table 3, the data questionnaire was processed using IBM-SPSS software, the closer the correlation value is to 1, the stronger is that tendency, and the closer correlation is to 0, the weaker is the tendency [16]. Based on this results, question number one cannot be used because it has a significance value > 0.05, and Pearson Correlation only 0,193. However, this result was predicted by researcher because people have different levels of culture knowledges. The remaining four questions are declared valid because the significance value < 0.05. Furthermore, Q2 has a moderate correlation, and Q3, Q4, Q5 have a strong correlation.

**Table 4.** Cronbach’s alpha score

Reliability Statistics	
Cronbach's Alpha	N of Items
.796	4

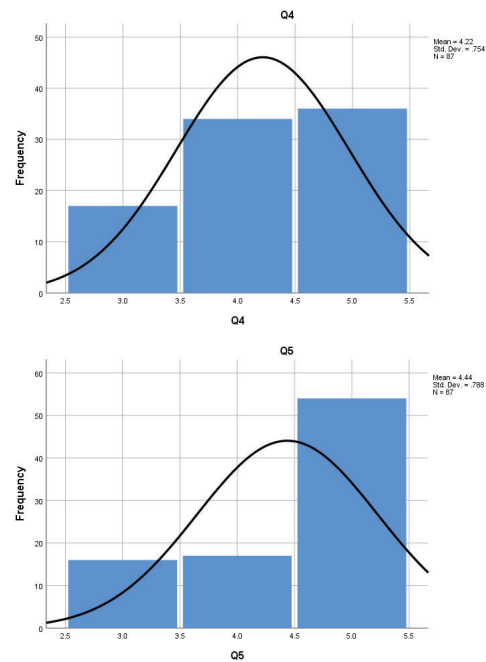
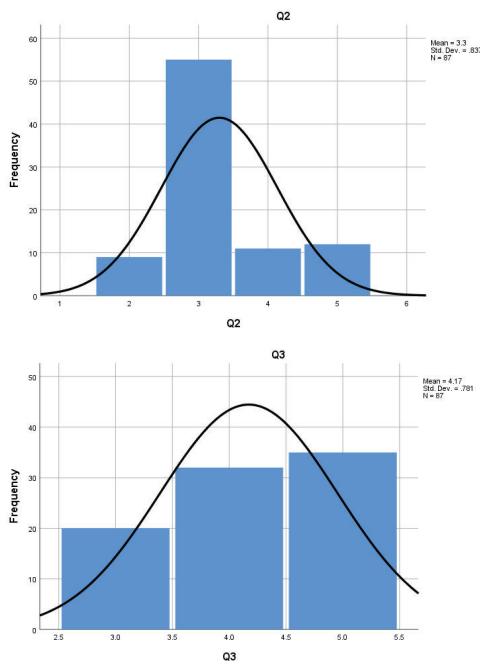
Based on the Table 4, Cronbach’s Alpha is 0,796 with four items. Thus, this experiment can show good level of consistency [17].

**Table 5.** Mean score

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Q2	87	2	5	3.30	.837
Q3	87	3	5	4.17	.781
Q4	87	3	5	4.22	.754
Q5	87	3	5	4.44	.788
Valid N (listwise)	87				

According to the mean score in Table 5, Q2 with score 3,30 (neither) indicates that exploring the Beyond Reality virtual exhibition has a moderate level of difficulty. Q3 with score 4,17 (agree) indicates the virtual exhibition gives interesting experience. Q4 with score 4,22 (strongly agree) and Q5 with score 4,44 (strongly agree), indicates that the Beyond Reality virtual exhibition can be used as an educational medium, and needs to be continued in the future to encourage traditional cultural knowledge among generation-Z.

**5.2 Graphical Results**



**Fig. 3.** Frequency Distribution of Response

As shown in Figure 3, the data distribution in this questionnaire shows that the effect of this virtual exhibition can significantly increase cultural knowledge, as the dominant position is rated at 3 or higher.

**6 Conclusion**

Based on the completed review from qualitative and quantitative data, it can be concluded, the generation-Z has understood the traditional cultures especially which come from their hometown, they also agreed to learn about various cultures from Indonesia as part of an effort to preserve cultural heritage, and it is important to apply traditional cultural content in the form of digital media as an alternative solutions when the COVID-19 pandemic makes it difficult for people to interact directly.

The generation-Z has an important role in maintaining the sustainability of a country's cultural heritage. The application of virtual exhibitions with new technology can be an interesting factor for them. According to Przybylski, generation-Z affected with fear of missing out (FOMO), the feeling of apprehension that one is either not in the know or missing out on information, events, or experience, due to the impact of excessive social media [18]. Furthermore, in context of this research, various cultures that were previously only in traditional forms, are now possible to be brought into digital content, which can be shared on social media platforms such as Facebook, Instagram, or TikTok. Previous studies have proven that social media can increase public awareness, the more often cultural content appears, the more generation-Z understand their culture.

Researcher suggests for the further study to explore other alternative form of new media, to increase traditional culture knowledge especially for the generation-Z.

*behavioral correlates of fear of missing out*, Comput. Human Behav., **29**, 4, pp. 1841–48 (2013).

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