

The Younger Generation's Views on Virtual Reality as a Promotional Media for Tourism in the Maimun Area

Rezha Destiadi¹, Winny Gunarti Widya Wardani², Syahid³, Rina Wahyu Winarni⁴

{rezhadestiadi@polmed.ac.id¹, winnygw@gmail.com², syahid.lppm@gmail.com³}

Computer Engineering and Informatics Department, Multimedia Graphics Engineering Technology, Politeknik Negeri Medan, Sumatera Utara, Indonesia.¹, Visual Communication Design Department, Universitas Indraprasta PGRI, Jakarta, Indonesia²³⁴

Abstract. Maimun Area, Medan city, North Sumatra, is a cultural heritage that has the potential to increase national economic growth, especially through the development of global-scale tourism. The availability of visual technology-based tourism promotional media is also greatly needed. A survey method with a quantitative approach was used as preliminary research. This study aims to determine the views of the younger generation on the potential advantages and disadvantages of Virtual Reality as a tourism promotional media for the Maimun Area. The younger generation is considered to play an important role in continuing the nation's cultural heritage. The results of the study indicate the potential for interest and desire to visit, as well as the potential for content and substance that do not meet expectations. This study is expected to be a reference for continuing the creation of a Virtual Reality model that suits the needs of global tourists.

Keywords: Younger generation, views, virtual reality, tourism, promotional media.

1 Introduction

Medan City is the gateway to the western part of Indonesia. The capital city of North Sumatra province is very strategic, because it is the center of trade, industry, business, and international tourism destination. Medan is known as the Malay City of Deli and Paris van Sumatra. This city has a number of historical cultural heritages, including the Maimun Area in Medan Maimun District. In 2023, the Maimun Area, which consists of seven tourist areas, was designated as a cultural heritage based on the decree of the Mayor of Medan.

Purwantiasning [1] stated that a historical area with character needs to have legal provisions, both at local, national and international levels. This is stated in Law of the Republic of Indonesia Number 11 of 2010, namely "that cultural heritage in the form of objects, buildings, structures, sites and areas need to be managed by the government and regional governments by increasing community participation to protect, develop and utilize cultural heritage". To support this provision, it is very important to continuously promote the potential of the Maimun Area tourist destination. This can help increase national economic growth.

Promotion is a communication technique carried out by an organization to inform about the products produced, both goods and services, with the aim of persuading and influencing consumers to make purchases [2]. Efforts to promote the Maimun Area have also been carried out by the local government, including disseminating information through official websites and social media such as Instagram.

However, the development of information technology today requires tourism business actors to be able to meet the information needs of global tourists more interactively, including by creating tourism promotional media that are able to follow technological advances. Information about tourist destinations is no longer sufficient just information through websites or social media, but promotional media are needed that are more thought-provoking and emotional, and are able to encourage tourists' interest in visiting.

Research by Syahid et al. [3] states that the use of technology in the concept of a creative economy, and the development of local resource creativity, aims to produce innovative products that can provide added value in the economic, social and cultural fields. Thus, the need for a cultural heritage tourism promotional media model that is able to present the advantages of the Maimun Area more interactively through technological advances is important. Cahyani, et al. [4] also said that this is not only an attraction, but also a determining factor in influencing tourists' decisions to visit a destination.

Among the forms of tourism promotional media that have the potential to meet the needs of information and tourist interaction experience is Virtual Reality (VR). Virtual Reality is a unique virtual experience for users, to explore and interact in real-time with the virtual world, to go beyond the limitations of traditional media and flat screens. The use of Virtual Reality technology allows users to feel emotional experiences and sensory experiences, such as actually being in their virtual environment [5].

The application of Virtual Reality uses a cinematography and photography approach. In cinematography, images function to convey visual narratives, create atmosphere, arouse audience emotions, and build film aesthetics [6]. While in photography, images function to encourage viewers to pay more attention to something in a new way, and encourage tangible knowledge [7].

Currently, Virtual Reality media are more widely used for games, entertainment, business, and educational facilities. While Virtual Reality for tourism promotional media needs is still very limited. This study is a preliminary research on the potential of Virtual Reality as a tourism promotional media in the Maimun Area of Medan City. This study aims to identify the advantages and disadvantages that exist according to the views of the community, especially the younger generation, about the use of Virtual Reality. The results of this study are expected to be an academic reference for the next stage of research, namely the creation of a tourism promotional media model in the form of Virtual Reality that is in accordance with the needs of global tourists.

2 Method

The Maimun Area has many historical tourist destinations, ranging from buildings, parks, places of worship, to monuments. This area needs to be preserved as a legacy for the next generation

of the nation. To find out the views of the younger generation on the potential of Virtual Reality as a tourism promotional media, a survey method with a quantitative approach was used. The survey method is widely used in social science, education, and economic research. According to Creswell [8], this method provides efficiency in collecting representative and valid data, from a wide population, and in a relatively short time, including by using a questionnaire instrument.

The results of this survey method aim to provide an overview of social phenomena in the local community environment. The survey method applied is a public opinion survey, namely measuring the views of local people about the potential of Virtual Reality as a promotional media for Maimun Area tourism that is in accordance with the development of the times.

The population in this study is the younger generation in the college environment who are studying computer engineering and informatics and multimedia graphic engineering technology. The selection of this population is based on the consideration that they have a direct relationship with the research topic. Therefore, the research sample was selected using a purposive sampling technique, namely respondents are selected based on certain criteria or objectives that have been set by the researcher, based on considerations of qualifications that are relevant to the focus of the research.

Quantitatively, data collection through questionnaires was distributed to 150 respondents aged between 18 and 40 years, who work as students and workers. Respondents are people who are active on social media, always work with computers, and have knowledge of graphic multimedia. The distribution of questionnaires was carried out via a google form link and distributed via the WhatsApp application based on groups. The data collection technique was in the form of a questionnaire with a combination of closed questions using a Likert scale, and open questions regarding views on the potential of Virtual Reality, views on the advantages of Virtual Reality, and views on the disadvantages of utilizing Virtual Reality as a tourism promotional media.

3 Results and Discussion

Medan City as the third largest city in Indonesia, is indeed prospective as a modern, prosperous, and religious metropolis [9]. One of the historical areas that can be prepared for this is the Maimun Area in Medan Maimun District. Based on the decree of the Mayor of Medan Number: 433/29.K. in 2023, the Maimun Area has been designated as one of 33 potential cultural heritages. The Maimun Area consists of the areas of the Mosque City, Maimun City, Pasar Merah, Pasar Merah Timur, Sei Mati, Suka Raja/Medan City, and Medan Maimun [10]. Law of the Republic of Indonesia No. 11 of 2010 concerning Cultural Heritage, in Article 1 paragraph 1a states that: "Cultural heritage is a cultural heritage of a material nature in the form of Cultural Heritage Objects, Cultural Heritage Buildings, Cultural Heritage Structures, Cultural Heritage Sites, and Cultural Heritage Areas on land and/or in water whose existence needs to be preserved because it has important value for history, science, education, religion, and/or culture through a determination process".

This research is an initial research in preparing the design of tourism promotional media in the form of Virtual Reality, as support for the development of historical areas into international tourist destinations. As explained in the method section, this study aims to collect initial data on

the views of local communities, especially the younger generation in academic environments, on the potential of Virtual Reality as a tourism promotional media for the Maimun Area.

3.1 The Importance of the Younger Generation's Views on the Potential of Virtual Reality as a Tourism Promotional Media

The younger generation has an important role to play in continuing the cultural heritage of a nation, including by actively participating in the preservation of cultural heritage. The flow of globalization, the invasion of foreign cultures, and the demands of modern development often threaten local culture, both the existence of historical buildings and artifacts, as well as the local wisdom of its people. This influence needs to be anticipated by inviting the younger generation to be involved in various issues or phenomena in society, so that they can learn to understand and ultimately dare to appreciate their own culture.

Riswan's research [11] shows that the involvement of the younger generation in local cultural activities and education can have an impact on increasing their sense of ownership of cultural heritage. With increasing knowledge, the younger generation not only feels more connected to their cultural heritage, but is also motivated to contribute to its preservation. This involvement is not only physical, but also includes emotional and intellectual aspects.

Therefore, this study opens the view of the younger generation towards the potential of Virtual Reality as a technology-based tourism promotional media. Data collection on the potential of Virtual Reality in this study is formulated in two main questions, namely the importance of interactive visual technology in the design of tourism promotional media and the potential of Virtual Reality to meet the needs of global tourists.

The results of quantitative data with a Likert scale show that respondents consider interactive visual technology to be very important, so that tourism promotional media appears more attractive and follows technological developments. The percentage of data views on this matter can be described as follows: 79 (53%) respondents stated that they strongly agree, as many as 66 (44%) respondents stated that they agree, as many as 0 (0%) respondents stated that they are doubtful, while 5 (3%) respondents stated that they disagree, and those who stated that they strongly disagree had a result of 0%. The total percentage of respondents who strongly agree and agree is 145 (96%), so it can be said that the need for promotional media that uses visual technology is prioritized.

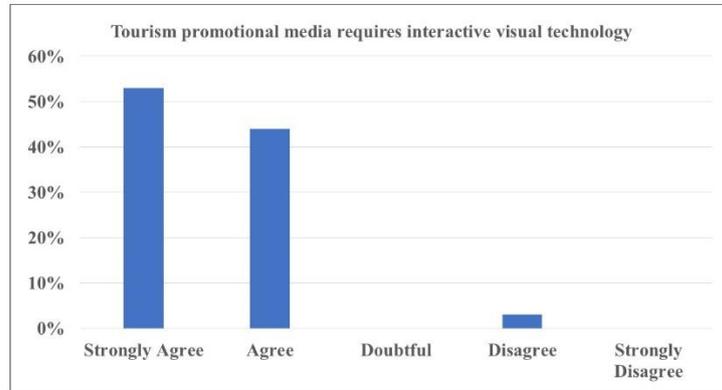


Fig. 1. Tourism promotional media requires interactive visual technology

In addition, the results of quantitative data also show that respondents consider Virtual Reality technology to be a solution for global tourism promotional media. The percentage of views on this matter can be described as follows: 58 (38%) respondents stated that they strongly agree, 78 (52%) respondents stated that they agree, 9 (6%) respondents stated that they were doubtful, while 5 (3%) respondents stated that they disagreed, and those who stated that they strongly disagreed were 0%. The total percentage of respondents who strongly agree and agree is 136 (94%), so it can be said that Virtual Reality technology has become a vital need in facing the challenges of the global tourism business world.

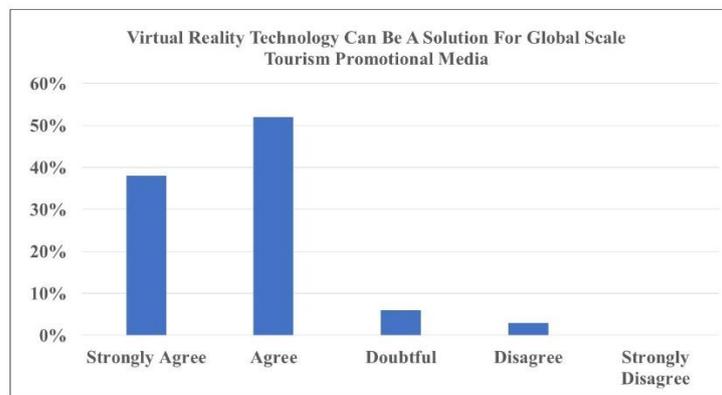


Fig. 2. Visual Reality technology can be a solution for global scale tourism promotional media

This view is in line with the results of research conducted by Djamil and Sulisty [12] on digital marketing, that the effectiveness of digital-based marketing can be seen through several criteria, such as digital tools and the goals to be achieved. Then, the selection of digital tools as a form of marketing communication must be able to produce positive impacts, including achieving customer satisfaction, efficiency and effectiveness of communication, encouraging customer interaction, and building brands and images.

3.2 Potential Advantages and Disadvantages of Virtual Reality as a Tourism Promotional Media

The results of the survey data on the potential advantages of Virtual Reality as a tourism promotional media show that there are respondents' views on obtaining a real and interactive experience, building interest and desire to visit, obtaining preliminary information about the tourist area, and obtaining new knowledge and insights about tourist attractions. The percentage of quantitative data in terms of the potential advantages of Virtual Reality is as follows: 87 (58%) respondents stated the potential for obtaining a real and interactive experience, 96 (64%) respondents stated the potential for building interest and desire to visit, 76 (51%) respondents stated the potential for obtaining preliminary information about the tourist area, and 84 (56%) respondents stated the potential for obtaining new knowledge and insights about tourist attractions. Based on the results of the data, the highest percentage is mainly on the potential advantages in terms of building interest and desire to visit.

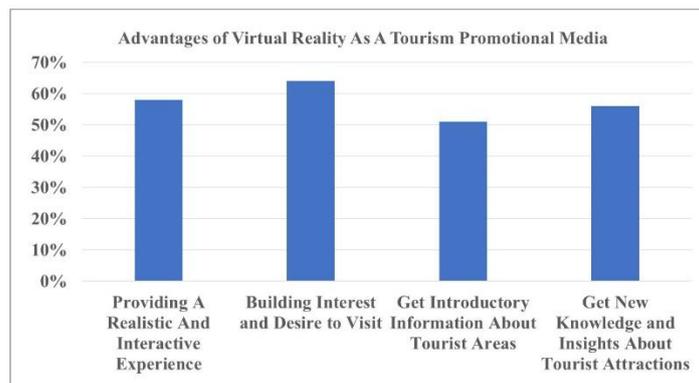


Fig. 3. Advantages of Virtual Reality as a tourism promotional media

Furthermore, the results of the survey data on the potential disadvantages of Virtual Reality as a tourism promotional media show that there are respondents' views on limited duration and information, visualization that does not satisfy needs, requires high costs, and content and substance that do not meet expectations. The percentage of quantitative data in terms of potential disadvantages of Virtual Reality is as follows: 87 (58%) respondents stated the potential for limited duration and information, 69 (46%) respondents stated the potential for visualization that does not satisfy needs, 91 (61%) respondents stated the potential for requiring high costs, and 93 (62%) respondents stated the potential for content and substance that do not meet expectations. Based on the results of the data, the highest percentage is mainly on the potential disadvantages of content and substance.

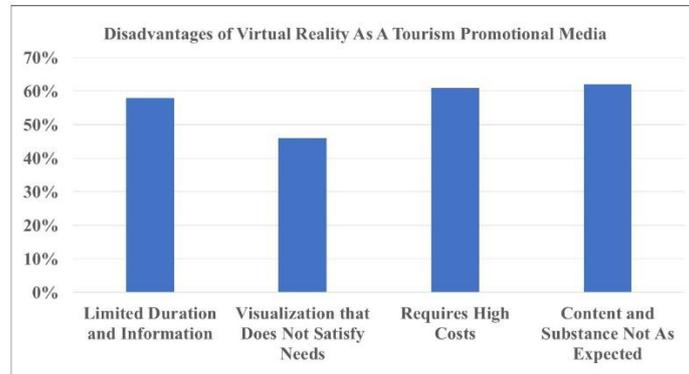


Fig. 4. Disadvantages of Virtual Reality as a tourism promotional media

Based on the data results on the potential advantages and disadvantages above, it can be seen that there is a relationship that mutually influences the needs of the younger generation when using Virtual Reality. Therefore, a strategy is needed that can minimize the disadvantages of Virtual Reality, especially when applied as a tourism promotional media. The relationship between the advantages and disadvantages can be described as follows:

- a. The user's need to obtain a realistic and interactive experience through Virtual Reality media often cannot be met, because there are factors that influence limitations, such as not being used to Virtual Reality equipment or health reasons. Kourtesis, et al. [13] in their research stated that the maximum duration of a Virtual Reality session should be between 55 and 70 minutes, especially if the user is already familiar with the VR system. In fact, to narrate a historical area such as the Maimun Area, which consists of several areas with different characteristics, of course a longer duration is needed. The solution that can be applied is, tourism promotion media is created for each different area. For example, the Virtual Reality about the Maimun Palace is a separate spectacle that is not combined with the Virtual Reality of the Al-Mashun Grand Mosque, even though the two tourist attractions are in the same location.
- b. The interest and desire of users to visit tourist attractions is greatly influenced by visualizations that are able to provide user satisfaction. The potential advantages of Virtual Reality that are able to encourage the interest and desire of users to visit in real terms are basically influenced by their experience when interacting with the show. Virtual Reality visualization cannot be separated from the cinematography approach, where the narrative is packaged by considering shooting techniques, lighting, framing, background composition, and sound effects. As a tourism promotional media, Virtual Reality shows must be able to arouse the emotions and thoughts of their viewers, so that their visual narratives can present an imaginative imitation of the reality of life. The concept of the Maimun Area atmosphere visualized in Virtual Reality must represent the existence of cultural heritage in its relationship with humans, nature and culture. From the perspective of society, the cinematography approach in Virtual Reality can function as information, as well as entertainment. Knowledge that is conveyed in a fun way allows users to be inspired to visit the object directly.

To convey historical stories effectively, a photographic approach is also required, because the resulting images can be a way to convey cultural messages. Through photographic images, the delivery of messages about history can be communicated to readers in visual ways. Moreover, current digital photography technology allows images to be taken with mobile devices, complete with sophisticated editing processes. However, conveying messages about history through the art of photography still requires a visual strategy, as stated by Hartel and Thomson [14], communicating messages in photographic works is the same as writing the visual power of images, because through images, people can be encouraged to pay more attention, remember more easily, encourage curiosity, build stories, increase understanding, empathy, and at the same time encourage knowledge. In addition, certain effects are also needed that can create visual appeal and audience attention.

- c. The need to obtain initial information about tourist areas using Virtual Reality sometimes cannot be met due to high costs. Currently, the use of Virtual Reality technology is not yet widespread and is only available in limited places that require a lot of expenditure for its users. To overcome this, cooperation can be carried out with third parties such as educational institutions or tourism business actors, as part of education and promotion.
- d. The need to gain new knowledge and gain insight is also sometimes unfulfilled, because the visualization of the narrative presented does not meet expectations. The potential disadvantages of Virtual Reality can be avoided by considering the principles in processing visual narratives through the presentation of images. Schirato and Webb [15] mention that among the important principles is the plot or storyline to explain the "what" and "why". Then there is the narrator viewpoint, as the point of view from which it is told. Then there is an explanation of the event, as important things that happen in the story and details about the time and place of the event. These principles can connect the narrative with the image to become a complete unity. In the visual narrative of Virtual Reality, these principles can basically be adjusted to the needs. For the needs of tourism promotional media, narratives about history and artifacts related to cultural heritage buildings can be made more dominant with visualization of 360-degree moving images. When the combination of images and narratives is able to build attraction, as well as visual perception, then the spectacle is considered to have visual power.

In general, the following table shows the relationship between the advantages and disadvantages of Virtual Reality:

Table 1. Advantages and Disadvantages of Virtual Reality as a tourism promotional media

No	Advantages	Disadvantages	Strategy
1	Providing a realistic and interactive experience	Limited duration and information	Tourism promotional media is made in a series, so that it does not exceed the provisions for the duration of use of Virtual Reality which is safe for health.
2	Building interest and desires to visit	Visualization that does not satisfy needs	Using a cinematography and photography art approach

3	Get introductory information about tourist areas	Requires high costs	Establishing cooperation with third parties, such as educational institutions or tourism business actors to reduce high production costs.
4	Get new knowledge and insights about tourists attractions	Content and substance not as expected	Processing content and substance with reference to the principles of visual narrative

3.3 Discussion

The discussion of this study highlights how the younger generation's perception of Virtual Reality (VR) as a tourism promotional medium represents a growing alignment between cultural preservation and digital innovation. Compared to previous studies, this research reinforces the argument that immersive technology can strengthen tourism engagement through emotional and experiential interaction. The findings imply that the successful use of VR for cultural heritage promotion requires not only technological readiness but also strategic narrative design to maintain cultural authenticity. Moreover, the data reveal that the younger generation's positive response indicates potential sustainability of cultural tourism if VR is integrated effectively within educational and marketing contexts. This discussion contributes to the broader discourse on how technology can mediate cultural continuity and enhance economic growth in the creative economy era.

4 Conclusion

This study concludes that one of the efforts to help increase national economic growth is to develop the potential of historical tourist destinations to the global level. The Maimun area, in Medan Maimun District, Medan City, North Sumatra, is one of the cultural heritages that has an important role, because it is located at the gateway to the western part of Indonesia, and is a destination for foreign tourism. This area needs to be continuously promoted sustainably by involving the role of the younger generation. Research on the views of the younger generation on the importance of Virtual Reality technology-based tourism promotional media is part of local cultural activities and education that can arouse the desire for ownership of the younger generation towards cultural heritage. The results of the study show that the younger generation views the importance of the need for tourism promotional media that uses Virtual Reality technology to face the challenges of global tourism. The younger generation also views that the selection of digital tools as a form of marketing communication must be able to produce a positive impact as advantages of Virtual Reality, namely achieving customer satisfaction in terms of obtaining realistic and interactive experiences, building interest and desire to visit tourist locations, obtaining preliminary information about tourist destinations, and gaining new knowledge and insight about tourist attractions. The factors that become disadvantages of Virtual Reality, such as limited duration and information, visualization that does not satisfy needs, the need for high costs, and content or substance that does not meet expectations, can be solved with a visual strategy using a cinematography approach, photography art, principles of visual narrative, and establishing cooperation with third parties. This research is expected to be

an academic reference for further research, namely the creation of a tourism promotional media model in the form of Virtual Reality that is able to meet the needs of global tourists.

Acknowledgments. We would like to express our gratitude and appreciation to the Directorate of Research, Technology, and Community Service, Directorate General of Higher Education, Research, and Technology, Ministry of Higher Education, Science, and Technology (DPPM DIKTISAINTEK) for funding the Fundamental Basic Research (PFR) activities for the 2025 fiscal year entitled "Model of Cultural Heritage Tourism Promotional Media in the Maimun Area, Medan City Based on Virtual Reality Technology and Multimedia Graphics". We would also like to thank LLDIKTI Region III Jakarta and the Institute for Research and Community Service (LRPM) of Indraprasta PGRI University for supporting this research activity.

References

- [1] Purwantiasning, A. W.: Penetapan kawasan bersejarah sebagai sebuah usaha pelestarian. *NALARS Jurnal Arsitektur*. Vol. 21 No. 1, pp. 1-8 (2011).
- [2] Prastiyanti, D. P. and Yulianto : Media promosi pada dinas pariwisata daerah Yogyakarta dalam meningkatkan kunjungan wisatawan. *Journal of Indonesian Tourism, Hospitality and Recreation*. Volume 2 No. 2, pp. 174-184 (2019).
- [3] Syahid, Wardani, W.G.W. and Akbar, T.: Kreativitas pesan kampanye dalam produk ekonomi kreatif video musik animasi "Sabda Alam". *JSEH, Jurnal Sosial Ekonomi dan Humaniora*. Vol. 9 No. 4, pp. 495-501 (2023).
- [4] Cahyani, F. A., Lukman, L. A., Lestari, D. W., Jannah, A. N. dan Trimah, S.: The influence of tourist attraction and service quality on the interest of visiting tourists on TKL ecopark. *JHSSB, Journal of Humanities, Social Sciences and Business*. Vol 2 No. 2, pp. 401-408 (2023).
- [5] Zheng, T. dan Feng, X. S.: The application and innovation of virtual reality technology in network media. *SHS Web of Conferences. ICPAHD. EDP Sciences*, pp. 1-4 (2024).
- [6] Wijaya, A., Apridiansyah, Y., Damita, Y., Fauzan, I. A., Alfares, T. R. And Aksyah, M.: The role of cinematography in the field of technology and information as a media promotion for Bengkulu province tourism department. *Jurnal Besemah*. Vol. 2 No. 1, pp. 43-52 (2023).
- [7] Wardani, W. G. W., Wulandari and Syahid : Visual anthropological study of photographic works of Gunung Padang Site as a tourist attraction in Karyamukti Village, Ciganjur, West Java. *IJASTE – International Journal of Applied Sciences in Tourism and Events*. Vol. 3 No. 2, pp. 178-198 (2019).
- [8] Kurniawati, E. and Rindrayani, S. R.: Pendekatan kuantitatif dengan penelitian survey : studi kasus dan implikasinya. *Sosial: Jurnal Ilmiah Pendidikan IPS*. Vol. 3 No. 1, pp. 65-69 (2025).
- [9] Sagala, D.: Analisa pola perkembangan wilayah Medan. *JPSTD. Journal of Placemaking and Streetscape Design*. Vol. 1 No. 2, pp. 109-116 (2024)
- [10] Aldi, N.: Daftar 33 cagar budaya yang ditetapkan Walkota Bobby di Tahun 2023. Diakses dari detikSumut, <https://www.detik.com/sumut/budaya/d-6588395/daftar-33-cagar-budaya-yang-ditetapkan-walkot-bobby-di-tahun-2023>, (2023)
- [11] Riswan Z.: Melestarikan budaya leluhur oleh generasi muda. *Jurnal Kolaboratif Akademika*. Vol. 2 No. 1, pp. 1-8 (2024).
- [12] Djamil, F. D. and Sulisty, A.: Implementasi virtual reality dalam pemasaran pariwisata (studi pada taman pintar dan play both). *Journal of Information System Management (JOISM)*. Vol. 5 No. 1, pp. 33-39 (2023).
- [13] Kourtesis, E., Collina, S., Doumas, L. A. A. and MacPherson, S.: Validation of the virtual reality neuroscience questionnaire: maximum duration of immersive virtual reality sessions without the

presence of pertinent adverse symptomatology. Original Research. *Frontiers in Human Neuroscience*. Vol. 13, pp. 1-13 (2019).

[14] Hartel, J., & Thomson, L.: Visual approaches and photography for the study of immediate information space. *Journal of the American Society for Information Science and Technology*. Vol. 62 No. 11, pp. 1-11 (2011).

[15] Schirato, T. dan Webb, J.: *Reading the visual*. Crows-Nest: Alen & Unwin (2004)