

Research Article

Pagelaran Smartland: Using Virtual Reality Media to Increase Hybrid Tourist Visits for the Pottery Industry

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Abstract.

Pagelaran Village is a projected educational tourism village that focuses on the development of traditional pottery. However, with the number of visitors decreased during the pandemic, there are several difficulties to attract enthusiastic visitors and increase tourist visits. This causes higher turnover rates which is projected to increase significantly when the pandemic ends. The Pagelaran SmartLand design aims to provide a digital infrastructure for virtual tourist visits through virtual reality technology that can be accessed easily and is able to be integrated with the pottery craftsmen of Pagelaran Village. The media development method used an asset-based community development (ABCD) approach that focuses on integrating local assets with the latest technology through asset inventory. The media validity level was obtained through validity testing by material and media experts. The profitability growth rate of the Pagelaran Village pottery industry after the media implementation was measured through a paired t-test with guidelines based on the significance value (Sig). If Sig. (2 tailed) < 0.05, then H_0 is rejected and H_a is accepted and if Sig. (2-tailed) > 0.05, then H_0 is accepted and H_a is rejected. A practicality test was carried out to identify the media practicality which was obtained through obtained value/maximum score x 100%. In this regard, the Pagelaran SmartLand can accommodate an increase in hybrid tourism visits to the pottery industry in Pagelaran Village and has the potential to provide an increase in turnover for pottery craftsmen.

Keywords: SmartLand, Pagelaran village, tourism, virtual reality

1. Introduction

Pagelaran Village is part of the geographical sub-district in Malang Regency, East Java Province, Indonesia. The potential of the Pagelaran Village initially focused predominantly on the arts. This is based on information from Sukirno, a senior puppeteer in

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Mataraman Hamlet. The potentials in Pagelaran Village, especially Mentaraman Hamlet, make the activities of its citizens never empty. Two times a week there are musical and dance training in the studio. The Pagelaran community still holds traditional noble values which have strong social ties. The behavior of this cultural tradition affects the way of adaptation, enculturation (in a cultural perspective) [2], and habits in its application in daily life [3]. This is based on the similarity of blood background, place of residence, and livelihood. This condition also makes Pagelaran Village still have a strong local cultural identity.

The pottery industrial village of Pagelaran Village has many educational tourism objects based on edusosiopreneurship. Innovative applied efforts are needed that give visitors freedom to two choices of face-to-face market and online market (hybrid market) [4]. This innovative applied effort provides two opportunities: (1) Visitors can experience digital infrastructure in the form of virtual reality to travel around and visit the industry, (2) Visitors can buy products from the Pottery Industry Village of Pagelaran Village virtually when visiting. This effort provides convenience for two things: (1) Visitors can pay attention to the industry through learning that is not limited by space and time, (2) Visitors can buy products digitally with a 3D model preview, (3) For the founder of the Pottery Industry Village, Pagelaran Village can reduce the costs of home-based companies and increase visitor attention digitally in an inclusive marketplace.

2. Method

In this activity program using the ABCD (Asset Based Community Development) method. The ABCD method is a suitable method to be used in the process of developing community assets [6]. There are five important steps in the asset-based community development method to carry out the initial stage of activities to completion which become the roadmap, starting with define, discovery, dream, design, destiny [7]. Media development flow using ABCD as follows:

Measurement of the validation test uses the following formula:

$$V.ah = \frac{TSe}{TSh} \times 100\%$$

Description:

V.ah. : Experts Validation

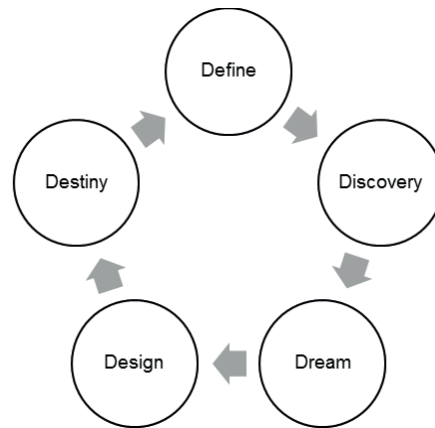


Figure 1: Media development flow using ABCD.

TSe : Total Empirical Score

TSh : Total Expected Score

The value data from the pre-test and post-test were analysed through a prerequisite test using Kolmogorov Smirnov with the basis of decision making if the value (Sig.) > 0.05 then the data distribution was normal and if (Sig.) < 0.05 then the data distribution was not normal. The proposed hypothesis is H_0 : There is no significant difference in the average sales of pottery before and after the implementation of the media and H_a : There is a significant difference in the average sales of pottery before and after the implementation of the media. Then the data analysis and hypothesis decision making use the paired t-test which refers to the guidelines if the significance level (Sig) < 0.05 then H_a is accepted, and vice versa if the significance level (Sig) is 0.05 then H_0 is accepted and H_a is rejected.

Then the product practicality test was carried out which was measured through five indicators, namely the ease of user interface in using the media, time efficiency, being able to be used as an appropriate technology tool, durability of the tool, development and maintenance costs. Measurement of practicality test uses the following formula:

$$Practicality = \frac{Ecquisit\ Score}{Maximum\ Score} \times 100\%$$

The assessment of the practicality test is based on the level of achievement if 81% - 100% are classified as very practical.

3. Finding and Discussion

3.1. User Interface and Device Display

The first stage is the identification of materials [12] in the virtual reality marketplace, this process can accommodate the producer’s name, geographical location, and application of transaction features in virtual reality that can be enjoyed with oculus (virtual reality glasses). In this regard, there are 5 (five) virtual stores with the following superior products:

TABLE 1: Virtual stores with the following superior products.

No	Manufacturer name	Product
1	Feri	<i>Wajan, cobek, maron, empluk, and luweng</i>
2	Agus	<i>Cobek, vase, gendok, anglo, and prapen-prapen</i>
3	Yatmono	Ashtray, bunny tray, traditional dispenser, serabi mold, and <i>dandang</i>
4	Sugeng Hariyanto	<i>Gendok jamu, klowongan, cobek, fish spawn, dandang, gentong, and gendok ari-ari</i>
5	Tris	<i>Ceret, wajan serabi, vase creations, gentong dawet, anglo, flower pot, big gentong, and lotus pot</i>

Furthermore, the design process for the development of the Pagelaran Village virtual reality marketplace which can be accessed via pagelaransmartland.com is as follows:

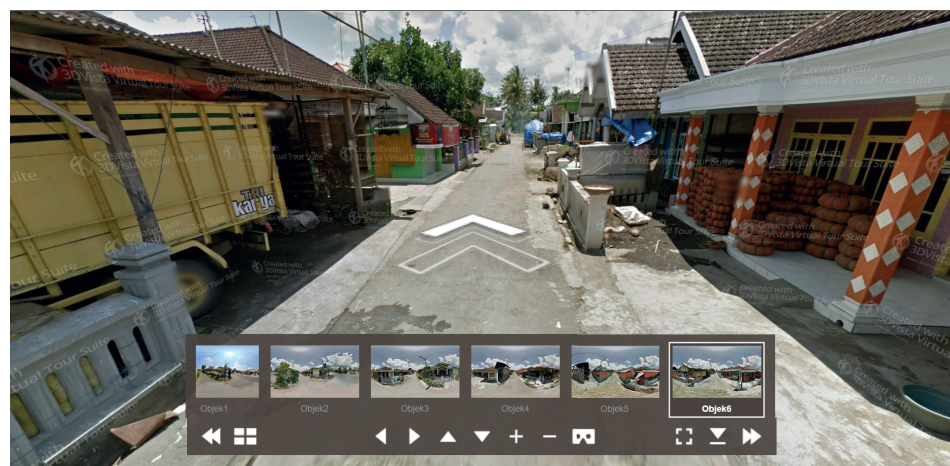


Figure 2: Visitor Journey Visual (website and oculus display).

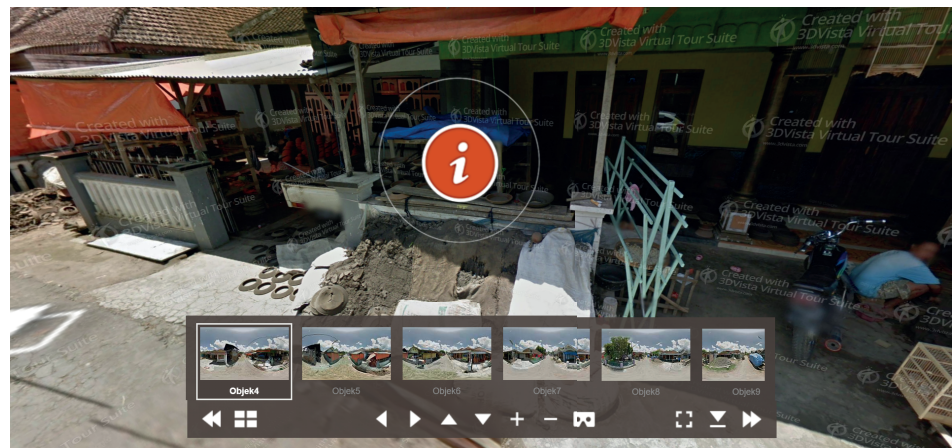


Figure 3: Online shop that can be chosen by visitors (website display and oculus).

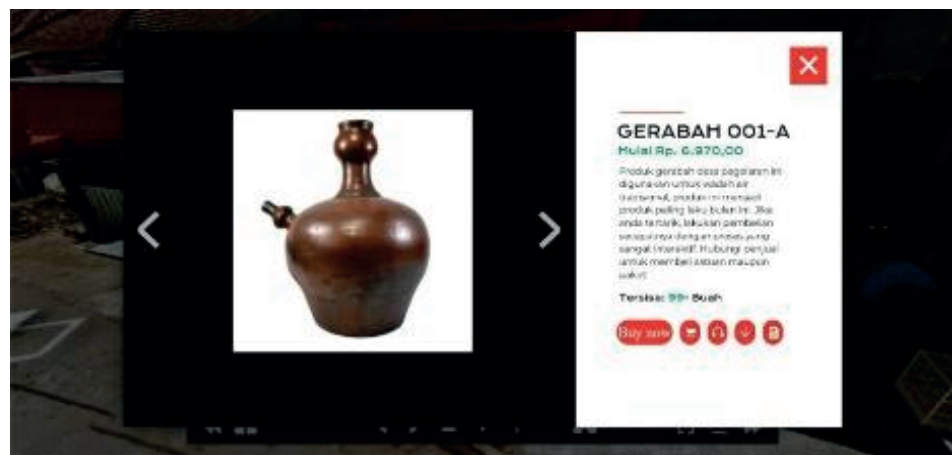


Figure 4: Product development (website and oculus display).

3.2. Data Analysis, Measurement, and Testing

Based on material expert validators and media validators on virtual reality media as an effort to increase hybrid tourism visits, the pottery industry in Pagelaran Village obtained a percentage level of 93.2%. And the results of media validation obtained a percentage level of 95.2%. It can be concluded very feasible in every aspect of the material validation test and media validation test.

Based on the results of the Kolmogorov Smirnov prerequisite test, the value (Sig.) is 0.200 greater than 0.05 or $0.200 > 0.05$, it can be concluded that the pre-test and post-test data are normally distributed. From the results of the paired samples statistic above, it shows that the average sales result before the implementation of the media is Rp. 3,735,950.00. While the average sales results after the implementation of the media is Rp. 4,384,600. Based on the analysis of paired samples statistics above, it

can be seen that the average sales of pottery after the implementation of the media tend to increase. The results of the t-test in the form of Paired sample Test show that the significance value is 0.000, which means the significance value (2-tailed) is smaller than 0.05 or $0.000 < 0.05$, then H_0 is rejected and H_a is accepted. There is a significant difference to the average sales of pottery before and after the implementation of the media.

		Paired Samples Test							
		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
Pair		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
1	Sebelum - Sesudah	-648650.000	120256.185	53780.201	-797967.775	-499332.225	-12.061	4	.000

Figure 5: Paired Samples Test.

The average sales data of Pagelaran Village are interpreted in the form of a graph below:

Figure 4.

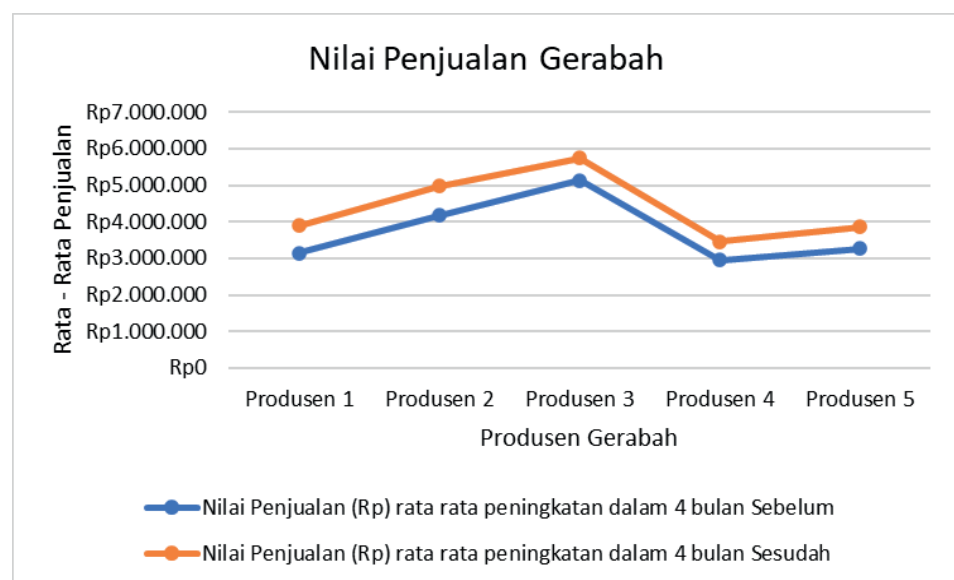


Figure 6: Graph of Pottery Sales.

Furthermore, based on the data from the results of filling out the media practicality questionnaire sheet by the pottery producers in Pagelaran Village, the overall results obtained are 91.04%.

4. Conclusions and Suggestions

The Smartland show, virtual reality media as an effort to increase hybrid tourist visits for the pottery industry in the Pagelaran village can contribute to increasing product marketing through transactions and product previews in the virtual reality marketplace implementation system.

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