

# INCUBATION OF COMMUNITY SANAN VILLAGE TO PRESERVE CULTURAL ARCHIVES BASED ON NFT

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## Abstract

Tempe Sanan Industrial Village is a creative industrial village with distinctive history, culture, and local content. This village uses conventional archives using paper-based notes and printing within 40 years that have started to rot, fade, and difficult for visitors to read as educational tours. The transformation of historical, cultural, and local content archives must involve permanent blockchain-based technology using crypto principles. This activity aims to change the new future archiving transformation process through Non-Fungible Token (NFT)-based digital assets. The blockchain network in a decentralized, delisting and permanent NFT will be suitable as a modern and futuristic archival. This community service uses the ABCD (Asset Based Community Development) approach by building partnerships to identify the community potential and habits. The media development using ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). In the trial phase, the media validity tested by material and media experts. Paired t-test used to analyse the media effectiveness. Decision making is based on 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. The media practicality is measured through a practicality test by dividing the acquisition value by the maximum score and multiplied by 100 percent (%). In this regard, the incubation of human resources for the people of Kampung Sanan through NFT digital artwork can be a central effort to transform historical, cultural, and local content archives.

**Keywords:** Sanan, Culture, Archive, Pattern, NFT

## 1. Introduction

In Malang City, Small and Medium Enterprises (SMEs) are an inseparable part of the community's economic activities. This is proven by the data from the DINKOMINFO of Malang City which provides a description of the industrial area located in the city of Malang. Three jargons are carried in the "tri bina cita" of Malang City, namely Malang as a city of education, industry and tourism. Sanan village is a village located in Purwantoro Village, Blimbing District, Malang City. Kampung Sanan has an area of  $\pm 20$  Ha, which includes RW 14 (4 RT), RW 15 (9 RT), RW 16 (9 RT). Sanan Village is one of the SME areas in Malang whose economy is growing because of its tempeh chips business. The residents of Sanan have dedicated themselves to producing tempe in Malang since 1980, especially tempe chips. For 70 years, the people of Sanan are aware that history and archives have a strong relevance in the Tempe Sanan Industrial Village [1]. History as a science that studies past events, in its disclosure requires archives [2]. Through the observations of the research team, even in the current context, it is not only historians who need archives, but almost all branches of science require archives [3], especially those related to the tourism industry in the corridor of local historical archives.

Sanan community awareness grows with memories of the past that must be preserved, in order to become a medium or evidence that will always be used to deal with problems and as a means of making decisions in the future. Cultivating a love of local history can certainly foster a sense of love for the homeland. This feeling will grow after seeing and observing the traces of the nation's journey collected in the archives. Archives are one of the most important parts in the history of the region, especially industrial areas [4]. Through archives, people can interact with visitors through every event that occurs [5].

Based on the results of a survey conducted by the implementation team, the index value for the development of the Tempe Sanan Industrial Village through the supply side approach was 91.31% with a feasibility index in the category of feasible to be developed in the archive management process. Through a SWOT analysis, Tempe Sanan Industrial Village is in a steady position. The general strategy that needs to be applied in dealing with this situation is to penetrate the digital infrastructure of incubation through the human resources of the people of Kampung Sanan in an effort to preserve historical, cultural, and local content archives based on interactive audio-visual patterns as non-fungible token (NFT) digital artwork assets that need to be implemented and ready to be auctioned in the international marketplace as income generating.

## 2. Method

In this activity program using the ABCD (Asset Based Community Development) method, by utilizing the assets and potential of every youth or community. The ABCD (Asset Based Community Development) method is a suitable method to be applied in developing and approaching the community [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 defining, finding, making dreams and targets, designing, doing [7].

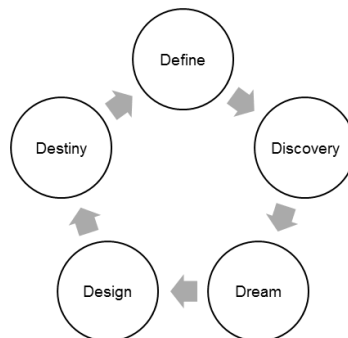


Figure 1. ABCD Method

For the final measurement of the validation level using the following formula:

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

Description:

V.ah. : Expert validation

TSe : Total Empirical Score

TSh : Total Expected Score

The value data from the pre-test and post-test were analyzed 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 increase between pretest and posttest and  $H_a$ : there is a significant increase between pretest and posttest. 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 by five indicators, namely the ease of user interface in using the media, time efficiency, can be used as a tool, durability of the tool, development and maintenance costs. The assessment of the practicality test is based on the level of achievement if 81% - 100% are classified as very practical, 61% - 80% practical, 41% - 60% quite practical, 21% - 40% less practical and 0% impractical

Measurement of practicality test uses the following formula:

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

### 3. Finding and Discussion

#### 3.1 User Interface and Software Feature Display

The first stage in completing the digital asset design process is to create a special group of cultural products in the form of illustrations (Maudi et al., 2014). After the first process is complete, the next step is to explore the shape ideas applied in the asset development sketch. Next is the third stage, with the outline process of the image which becomes the reference pattern. In this regard, the development products are as follows: (1) Sanan Ornamental Stone, (2) Tempe Culinary Festival, (3) Legendary Tempe Industry, (4) Cattle Breeders, (5) Innovative Tempe Processed Products, (6) Sanan Gotong Royong, and (7) Oglek Tempe Dance. The following is a complete display of product features and product development flow in the development operational system:

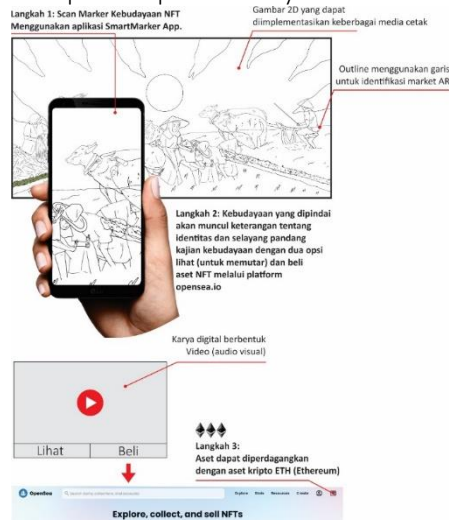


Figure 2. Product features and product development flow

#### 3.2 Data Analysis: Measurement and Testing of Data

Based on empirical scores from material expert validators related to all aspects of the material on interactive audio-visual patterns as non-fungible token (NFT) digital artwork assets, a score of 239 was obtained from an expected score of 250 with a percentage level of 95.6%. And the media validation obtained a score of 234 from an expectation score of 250 with a percentage level of 93.6%. Based on the results of the material and media validation test, the interactive audio-visual pattern as a Non-Fungible Token (NFT) digital artwork asset is very feasible in every aspect of the media validation test.

Based on the results of the Kolmogorov Smirnov prerequisite test, the significance value of 0.062 is greater than 0.05 or  $0.00 > 0.05$ , so it can be concluded that the data from the pretest and posttest results are normally distributed.

**Table 1. Kolmogorov-Smirnov Prerequisite Test**

		Unstandardized Residual
N		50
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	4.69850663
Most Extreme Differences	Absolute	.122
	Positive	.122
	Negative	-.086
Test Statistic		.122
Asymp. Sig. (2-tailed)		.062 <sup>c</sup>

The results of the paired samples statistics test on the paired t-test show that the average pre-test value is 61.62 while the post-test average is 79.20. So that there is an increase in the value of the community post test results.

**Table 2. Paired Samples Statics Test**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test	61.62	50	8.023	1.135
	Post Test	79.20	50	4.729	.669

Furthermore, the analysis of hypothesis testing obtained the results that the value of Sig. 0.000 which means less than 0.05 or  $0.000 < 0.05$ , then  $H_a$  is accepted and  $H_0$  is rejected. So that there is a significant increase between the pre-test and post-test of the people of Kampung Sanan regarding knowledge of historical archives, culture, and local content after the implementation of human resource incubation based on interactive audio-visual patterns as Non-Fungible Token (NFT) digital artwork assets.

**Table 3. Paired Samples Test**

		Paired Differences						Sig. (2-tailed)		
		Mean		Std. Error		95% Confidence Interval of the Difference		t	df	
		Mean	Std. Deviation	Mean	Std. Error	Lower	Upper			
Pair 1	Pre Test - Post Test	-17.580	9.767	1.381	1.381	-20.356	-14.804	-12.728	49	.000

Furthermore, based on the results of the analysis of the results of filling out the media practicality questionnaire by the community, the overall results obtained are 89.52%. When referring to the level of achievement of practicality values, the practicality of media by the community is at a very practical level. The following are the results of the media practicality test on each indicator:

**Table 4. Practicality Test Results**

Item	Praktikalitas	Interprestasi
1	88,00	Sangat Praktis
2	88,48	Sangat Praktis
3	88,64	Sangat Praktis
4	89,04	Sangat Praktis
5	93,44	Sangat Praktis

#### 4. Conclusions and Suggestions

The development of this media can accommodate all problems regarding the crisis of the local cultural archives of Kampung Sanan. This is also supported by the validation of media and material experts and through detailed data testing through holistic data analysis.

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