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Research Article

MOOC for Pagelaran Pottery Village: Boosting Income through Design Educational Tourism

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Abstract.
The implementation of this activity aims to design and build educative tourism infrastructure using the Massive Open Online Course (MOOC) as a means to increase the income potential of Pagelaran Village. Pagelaran Village is famous for its pottery crafts, which are rich in cultural values. However, the potential for tourism and related revenues has yet to be fully realized. Therefore, employing MOOC as a tool to provide an online learning experience for a package of pottery production training activities is expected to attract tourists and boost the income of the local community. The methods used in this implementation include field surveys, literature studies, and analysis of tourist needs and preferences. The approach adopted is the asset-based community development (ABCD) approach, which consists of five stages of activity including: 1) Discovery, 2) Dream, 3) Design, 4) Define, and 5) Destiny. The infrastructure built includes the development of the MOOC platform, offering learning materials related to history, manufacturing techniques, and the art of pottery. Additionally, practical learning facilities are also provided for tourists desiring to undertake direct courses without constraints by space and time. During initial testing, this MOOC garnered favorable responses from travelers who participated the course. The results of the implementation of this activity indicate that the use of MOOC as an educative tourism infrastructure can increase potential income in Pagelaran Village.

Keywords: MOOC; income; pagelaran pottery; educational; infrastructure

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1. Introduction

Gerabah Pagelaran Village has unique characteristics towards traditional with in-depth traditional skills and knowledge about pottery making. This can be developed into an educational tourism attraction [1]–[3]. However, the lack of supporting facilities and infrastructure, as well as knowledge about marketing and management of digital-based tourism is an urgent problem to be solved in Pagelaran. Efforts to solve this problem involve designing the Massive Open Online Course (MOOC), which is focused on providing training and education on tourism management, marketing, and basic knowledge of digital technology [4]–[6]. This MOOC is intended for local communities and visitors to Gerabah Village, so that they have the knowledge and skills needed to

manage and promote educational tourism in their village [7]. This MOOC can also be an effective promotional tool and a platform for the people of Kampung Gerabah to sell their pottery handicraft products online which can support significant potential income [8].

2. Method

The method used uses the Asset Based Community, ABCD (Asset Based Community Development) approach, which is a method that has the stages of Discovery, Dream, Design, Define, and Destiny. This method is carried out to identify the resources of a community, determine the vision of the future, have an action plan, determine responsibilities and roles, implement the plan to achieve a result.
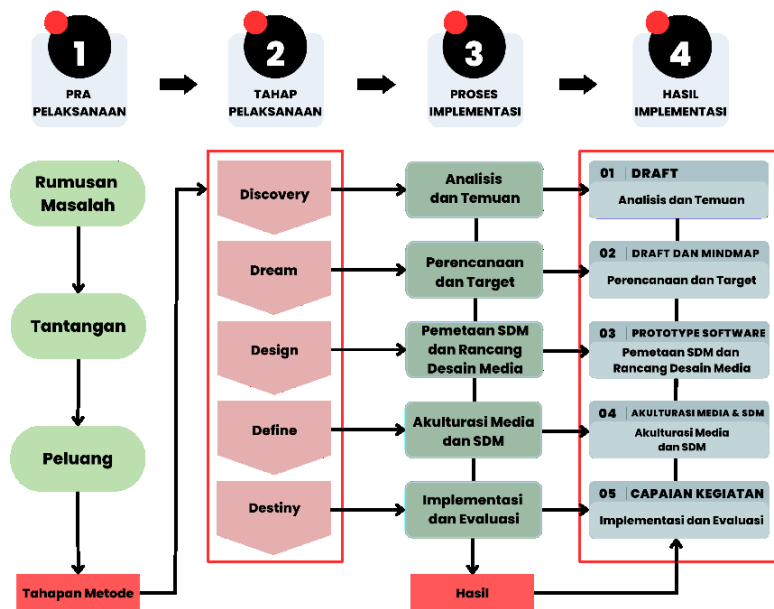

Figure 1: Activity Steps, adapted from [9, 10].

2.1. Data Collection and Data Analysis

Improvement of information technology with the development of the Massive Open Online Course (MOOC). MOOC is an online platform that provides courses in the field of education. This implementation collects data by interviews, questionnaires, and documentation. Then the type of data obtained is quantitative data for number-based validation tests and practicality tests. Qualitative data for needs analysis and expert validators.

2.2. Data Analysis

2.2.1. Media validation test and material validation test

After conducting an analysis of the validation test, to find out the conclusions that have been reached, the following is a table of media eligibility criteria referring to the percentage of achievement 80-100% with a valid interpretation and suitable for use, 60-79% with an interpretation that is not suitable for use, and <50% not valid and unfit for use.

2.2.2. Learning Outcome Effectiveness Test

The test of understanding of product knowledge is tested through an independent t-test because the samples are not paired. The hypothesis put forward is that H_0 there is no difference in learning outcomes after and before the implementation of the media and H_a there is a difference in learning outcomes after and before the implementation of the media. Decision making is based on the probability value if probability > 0.05 then H_0 is accepted and if probability < 0.05 then H_0 is rejected.

2.2.3. Practicality Test

The practicality test data was obtained by filling out an assessment instrument consisting of 10 statement items. Practicality data is analyzed by percentage using the following formula:

$$Practicality\ Score = \frac{Total\ score\ obtained}{Maximum\ total\ score} x\ 100\%$$

After the practicality percentage is obtained, the practicality level assessment criteria is based on if the practicality value range is 86% - 100% then it is at a very practical level, the range is 76% - 85% at the practical level, the range is 60% - 75% at the level is quite practical, the range is 55 % − 59% is not practical, and if the practicality value is less than 54% then it is at a very impractical level.

3. Results and Discussion

3.1. Product Flow

The construction of educational tourism infrastructure in Gerabah Village is to show tourists the uniqueness and richness of local culture. This product visualization can provide an immersive experience to MOOC users in the following chart:
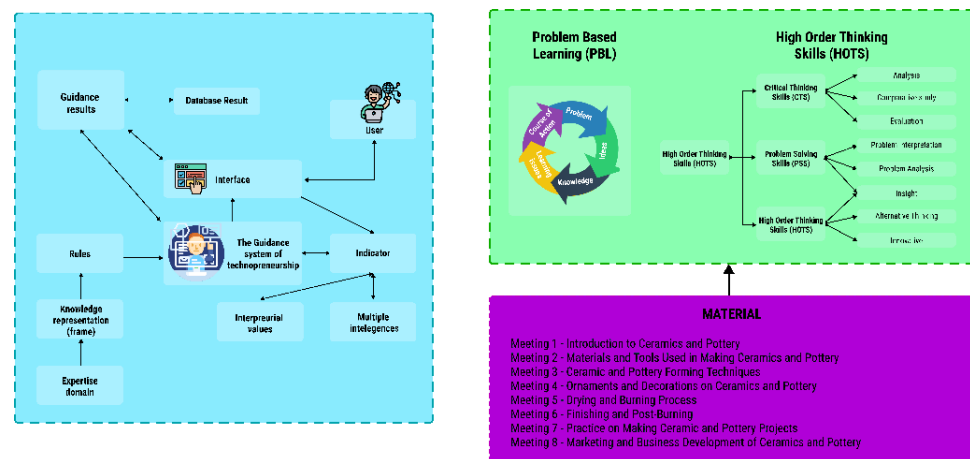

Figure 2: MOOC Learning Flow View.

3.2. Analysis Test Results

The results of the analysis show that MOOC provides tourists with easy and broad access to the traditional pottery-making process, decoration techniques, and related cultural values. In addition, the results of the analysis test show that product visualization in MOOC has a direct impact on tourists' interest in buying pottery products. Based on empirical scores related to all aspects of the media, a score of 107 is obtained out of a total expected score of 120. When interpreted in the form of a percentage, a result of 89% is obtained with valid criteria and is suitable for use. Based on empirical scores related to all aspects of the media, a score of 86 is obtained out of a total expected score of 100. When interpreted in the form of a percentage, a result of 86% is obtained with valid criteria and is suitable for use.

The effectiveness test is carried out through an independent t-test where before carrying out the test a normality test must be carried out as a prerequisite test. Based on the Kolmogorov Smirnov normality test the data is normally distributed. Furthermore, in the first part of the independent t-test, namely the group statistics, it shows that the value of 100 samples in the control group obtained a value of 49.15. Meanwhile, the

average value of the 100 samples in the experimental group obtained a much higher average of 94.09. From the presentation of these data it can be seen that the average value of the experimental class is higher than the average value of the control class.

TABLE 1: Group Statistic.

Group Statistics					
	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
Hasil belajar	Kelompok Kontrol	100	49.15	5.385	.538
	Kelompok Eksperimen	100	94.09	3.502	.350

The second part of the independent t test can be seen that F is calculated with equal variances assumed, namely 8,709 with a probability value of 0,000. Because the probability is < 0.05, H_0 is rejected or the variance is really different. Thus, it can be seen that there is a significant difference between the two variances.

TABLE 2: Independent Samples Test.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Hasil belajar	Equal variances assumed	27.768	.000	-69.961	198	.000	-44.940	.642	-46.207	-43.673
	Equal variances not assumed			-69.961	170.037	.000	-44.940	.642	-46.208	-43.672

3.2.1. Practicality Test

Based on the results of the analysis of the results of filling out the practicality assessment instrument, the total score obtained was 894 and the maximum total score was 1000. So that the overall average result was 89.4%. When referring to the practicality assessment criteria, the practicality of the media is at a very practical level.

3.3. Process of Dissemination and Implementation

The process begins by conducting a needs analysis to identify topics relevant to educational tourism infrastructure in these villages. Based on the results of the analysis,

a curriculum is designed by taking into account the needs and income potential that can be increased through educational tourism. Learning content, including videos, text, images and other supporting resources, is produced and structured in a structured and easy-to-understand way [11]–[13]. The selected platform allows for uploading and organising learning materials, interacting with course participants, and awarding certificates. Throughout the course, support and monitoring is provided to participants. Space for interaction between course participants is also provided, either through discussion forums or online question and answer sessions. Participants' progress is monitored and feedback is provided regularly. An evaluation is carried out after the course is finished to get feedback from participants and identify areas of improvement (Aruna et al., 2022). The results of the evaluation are used to improve future courses and improve the learning experience of participants.

4. Conclusions and Suggestions

The development of MOOC assets can provide and support the services of the Pagelaran pottery industrial village and have the potential for income generating in the future. This activity is carried out through Non-APBN Funding Sources at State University of Malang in 2023, the community can be assisted in developing potential, processing the capabilities of supporting resources, and building the capacity of local communities to improve this educational tourism infrastructure independently and sustainably. Suggestions for activities with a aligned scope in the future require the development of potential based on penta helix collaboration as a form of strong support between supporting stakeholders.

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