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RECONSTRUCTION OF PAST SETTLEMENTS IN AN AUDIO-VISUAL FORM

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ABSTRACT

People's living in the past has always become a big question for everyone, not only archeology. Unfortunately the answers to these questions are sometimes difficult to understand directly by public. It takes an effort to provide an answer that is easily accepted by the public. One of them is to build the mindset of archeology students to be able to make archaeological research products that are more popular and useful. This study seeks to apply a project-based learning model to the Ancient Settlement course. Students are assigned to conduct research to reconstruct past settlements around Jambi based on their traces. The results of this research are then narrated in the form of a documentary and uploaded to an online video sharing service. Based on the research results, research products in the form of audio-visual media are more accessible to the general public. In addition, the current generation of "digital native" students also seems to find it easier to narrate research results through audio-visual media compared to textual narration.

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INTRODUCTION

Archeology has an important role in making the reconstruction of past human life through the cultural material left behind(Ashmore & Sharer, 2010). One of the cultural materials that is the focus of archaeological studies is settlement(Ahimsa-Putra, 1995, 1997, 1998; Chang, 1972; Hasanuddin, 2001; Trigger, 1968). Cultural products in the form of settlements indicate patterns of life behavior and subsistence of the people(Bevan & Wilson, 2013; Willey, 1953). Prehistoric societies that still relied on hunting and gathering activities certainly had the characteristics of relatively nomadic settlements, following relatively seasonal patterns of hunting animals and forest resources.(Braje et al., 2017). In contrast to an agrarian society which of course will form settlement patterns around agricultural land, while maritime communities form settlement patterns around aquatic resources such as rivers and coasts.(Braje et al., 2017; Simanjuntak, 2006)

Based on various archaeological studies that have been conducted, quite a lot of traces of ancient settlements in Indonesia, and particularly in Sumatra, have been found. Even so, it is possible that there are still other ancient settlements that have not been discovered. Traces of these ancient settlements date back to various periods, starting from the prehistoric period, the oldest being around 73,000 years ago.(Bonatz, 2012; Tjoa-Bonatz, 2018; Westaway et al., 2017), the period of Hindu-Buddhist influence around the 4th to 14th centuries(Coedès et al., 2014; Rangkuti, 2008), the period of Islamic influence around the 14th to 19th centuries(Tjandrasasmita, 1989; Tjandrasasmitha and mujib, 1994), even to the period of colonialism to post-independence(Andaya, 1993; Reid, 1987).

The length of the chronology of the occupancy of Sumatra Island is of course very interesting if it can be reconstructed and represented to the general public, so that the general public will better understand how the history of the development of past civilizations on Sumatra Island. However, it is regrettable that the reconstruction and representation efforts have not touched all levels of society. Most of the reconstruction results are not represented in a user-friendly form that can be enjoyed by the general public. The format that is more often the output of archaeological research is usually in the form of books, journals, and other literature that requires more effort for ordinary people to understand.

The course in Ancient Settlements (Prehistoric, Classical, Colonial) with code ARK155 is a compulsory subject and one of the main courses in the Archeology Study Program, Department of History, Arts and Archeology, Faculty of Teaching and Education, University of Jambi. This course studies basic concepts, supporting theories, and various analytical

methods that can be applied to settlement archaeological studies (settlement archeology). In this course, students are also given examples of case studies of ancient settlements in general which are found in many archaeological sites in Indonesia. However, this course specifically explores ancient settlements in Sumatra which are integrated in the scope of material for macro and micro spatial concepts, spatial functions, contextual foundations between buildings and human life spaces.

The learning outcomes in this Ancient Settlement Course are that students are able to have knowledge and understanding of the definition of ancient settlements, the basic concepts of ancient settlements, supporting theories in the study of ancient settlements, and aspects of study in settlement archeology in general and specifically. Thus students are expected to be able to master the concept of settlement descriptively, theoretically, and analytically in general and implement it in depth in the field of archeology including its application to various problems and cases in the field. Meanwhile, skills that can be mastered by students include:

1. Able to apply the principles and paradigms of settlement archeology in procedurally studying ancient settlement problems
2. Able to increase the learning capacity of supporting science in the field of settlement archeology, so as to be able to apply it in studying and reconstructing traces of ancient settlements in Indonesia and especially in Sumatra
3. Able to analyze cases related to the phenomenon of past human settlements in the realm of archeology in general

From the learning achievements of graduates above, students are expected to be able to show that the learning process is not just a process of receiving information, ideas and skills. But it also includes the process of constructing new ideas or knowledge by the mind. Thus, the core of the learning process in the Ancient Settlements Course is the process of constructing knowledge of the phenomenon of archaeological data, so that it can be raised in narratives about settlements in human life in the past. With the accumulation of archaeological research data on ancient settlements and the insistence that archaeological publications be more acceptable to the general public, students are currently required to not only be able to acquire conceptual knowledge but also to be able to learn to produce outputs that can be useful to the general public.

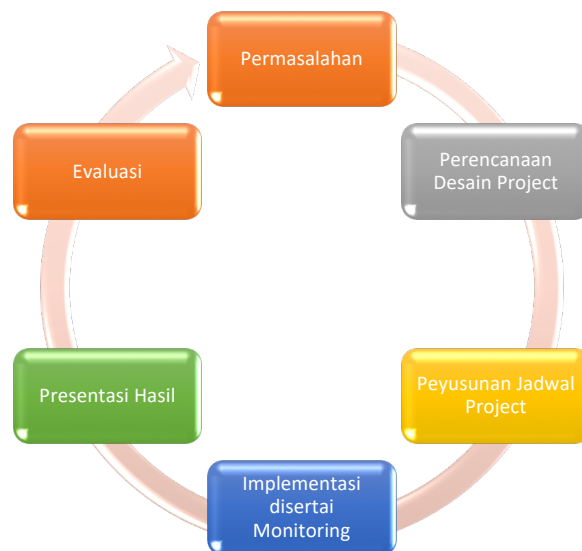
Digital literacy through online audio-visual media such as YouTube, which is growing rapidly at this time, actually provides broad opportunities for publication of research results (Mulus, 2021). Especially now that most of the students who are active in lectures fall into the category of "digital natives" who are more knowledgeable in digital literacy

technology(Lusoli & Miltgen, 2009; Pendit, 2013; Prensky, 2001). The challenge for the world of education, especially archeology, is of course to take advantage of this potential to develop new methods in archaeological publications, especially regarding ancient settlements. The description of past settlements and community activities will be easier for readers to capture in audio-visual form.

Unfortunately, optimization in this field is still minimal due to the lack of interest and skills of archaeologists in producing content based on archaeological research. Therefore, as an institution that carries out the task of producing human resources in the field of archeology, the Archeology Study Program at the University of Jambi really needs a learning method that is able to give students the ability to produce audio-visual content. Project-based learning that focuses on team-based projects is one of the methods that can be applied to spur student creativity in the learning process and is able to produce effects that are relevant to the material obtained by students(Anita, 2017; Herminarto, 2006; Patmanthara, 2016). Therefore the problem which is then raised in this paper is how to apply the team-based project learning model in making the reconstruction and representation of ancient settlements in audio-visual form?

RESEARCH METHODS

The learning model proposed in this Ancient Settlements course is a team-based project. Students study in groups by conducting research projects on the reconstruction of ancient settlements. More specifically, students are given the task of making a research project on the reconstruction of ancient settlements around Jambi and representing it in audio-visual form such as film making. Students will learn according to the project flow starting from the stage of determining the problem of study, design, implementation, to evaluation (figure 1). With this scheme, students are expected to be more creative, innovative, productive and cooperative in carrying out learning. The focus of this project lies in the reconstruction of ancient settlements with several background problems. In this odd semester of 2021/2022, The ancient settlement course class is divided into two, so the problems are divided into two major themes. The odd class with the theme of ancient settlements based on the subsistence of the people, while the even class with the theme of ancient settlements based on periodization.



Picture1. Project-based learning flow design in this study

This research uses the R & D (Research and Development) method which targets outputs in the form of film products based on the results of student research projects. Project research regarding the creation of a reconstruction model will be a research aspect, while product development for film works will be a development aspect. In the implementation of this learning model design, students in each class are divided into four groups with a total of around six to eight group members. After that, a choice will be given regarding the main theme of the study. One class bases settlement studies on the subsistence characteristics of the community, while another class bases studies on chronological periodization. Each group is then freed to determine the location of the case study and the scale of the assessment to be carried out.

The assessment or evaluation process in the PjBL must be objective and meet the requirements such as being valid, trustworthy and fair. In this context, students are given the opportunity to evaluate their project by conducting a self-assessment. Students must also be able to learn to provide constructive feedback on the work of other students in a group called peer-assessment. There are two assessment methods, namely formative evaluation and summative evaluation (Mogboh & Okoye, 2019). Formative evaluation is an assessment method that is carried out during a learning process/activity that provides occasional feedback to measure student work results. Meanwhile, summative evaluation is an assessment when the task project has been completed at the end of the semester. The results of the formative assessment will also be used as material for a summative assessment.

The summative evaluation stage at the end of the semester in this learning model also uses the public feedback method (Brady & Forest, 2020). Video content that has been created

and published via Youtube and other social media will be discussed with film experts and observers as well as cultural activists through webinars. The results of this discussion are expected to be able to elicit public response to the works that have been made by students. Includes the accuracy of the concept, the results of the reconstruction, and the way of representation. With this method, students will be encouraged to create works with an in-depth research background, so that what is later represented in film form will be representative. Apart from that, the films made will be made to be very mature, in terms of concept, scenario, script, making to the final editing process. This evaluation will also be applied to assess whether the learning model implemented is on target or not.

The authentic assessment tool used in PjBL to assess student processes and performance is in the form of a rubric. Rubrics are a form of formative assessment as an assessment guide to measure student performance based on various mutually agreed criteria. The rubric is also a work guide for producing products that are in accordance with the learning objectives that are usually given to students at the beginning of the lesson. Through this rubric, students can evaluate their own work (self-assessment) and are able to assess the work of other students (peer-assessment). The learning assessment rubric used as the basis for evaluation in the Ancient Settlements Course consists of two categories, an attitude rubric and an assignment rubric.

RESEARCH RESULTS AND DISCUSSION

Results

The application of the team-based project method in ancient settlement courses requires students to be active in developing a research project and representing it in the form of audio-visual media. At the research stage, students are able to offer various research ideas based on a working frame of reference. This framework provides constraints on the selected themes. These themes must refer to the subsistence of society and the chronology of the period. In this study, the division of groups and the selection of themes by each group can be seen in Table 1.

Table1: Study themes per group

No.	Groups & Classes	Theme
1	Ex. 1/Odd	Reconstruction of ancient community settlements with maritime cultural subsistence in the Jambi Serving area

2	Ex. 2/Odd	An ancient community settlement with a subsistence merchant culture in Rukam Village, Muarajambi
3	Ex. 3/Odd	An ancient community settlement with industrial or labor subsistence in the Sijenjang Area, Jambi
4	Ex. 4/Odd	An ancient settlement of a society with an agrarian cultural subsistence
5	Ex. 1/Even	An ancient settlement in the post-independence period in Muara Tembesi City, Batanghari
6	Ex. 2/Even	An ancient settlement in the classical period in the Muarajambi Baths Area
7	Ex. 3/Even	An ancient settlement in the Dutch East Indies colonial period around Angso Duo Market, Jambi City
8	Ex. 4/Even	An ancient settlement in the Islamic period in Jambi City

The themes that have been chosen by each group are then followed by a pre-research process, namely finding reference sources and archives that can be used in library research. The search for reference sources is quite assisted by the existence of a digital archive portal from Leiden University Libraries. These archives are generally in the form of ancient maps, ancient photographs, as well as reports and notes from the colonial period which are available free of charge. Even so, some archival sources are also paid so they cannot be used as library reference material.



Picture2. One of the descriptions of an ancient settlement on the banks of the Batanghari River in 1918

Source: Leiden University Libraries

The search for references to the literature is continued with the stage of deepening the study theme. Each group was given the task of making a research design in the form of a study framework matrix related to the chosen theme. The study framework contains the title of the study, background, problems, research methods, approaches, and analysis models. This review framework matrix is then used as a guideline in its development as a research report. The results of making this matrix were discussed in online class forums considering Jambi's condition when lectures were still in the orange zone,

The next stage in the student research process is literature study. This stage is crucial because it will determine the direction of the research planned in the study framework matrix. Based on the literature study conducted by each group, it can be seen that most of the themes that have been selected require data collection in the field. Therefore, groups that have problems with the existence of library data conduct research in the field, such as conducting interviews and tracing traces of ancient settlements that can still be found. Research in this field simultaneously maps the locations that will be used as video shooting locations during filming.



Picture3. Field research using village elder interview method by one of the groups

The results of the research that has been carried out by each group are prepared in the form of a report that conforms to the template. After that, these results are then used as the basis for developing the concept, scenario and narrative of the documentary. The concept, scenario and narrative of the film were then discussed online in large classes, so that each group

could provide responses and suggestions to other groups. This includes sharing information related to documentary filmmaking equipment

The last stage of the learning series using the team-based project method is taking videos, editing videos and uploading videos to online video sharing media, namely Youtube. This series of films takes about 2 weeks. Video products are divided into two types, one video for the trailer, and one video for the original film. The duration of each of these videos is limited to a maximum of between 30 seconds and 60 seconds for the trailer and 30 minutes for the full video. Both types of videos must convey what is the result of the research.



Picture4. Screenshot of one of the video trailers that aired via Youtube

Discussion

The Archeology Study Program at the University of Jambi is one of six study programs in the field of archeology in Indonesia. Five other study programs are at the University of Indonesia, Gadjah Mada University, Udayana University, Hassanudin University, and Halu Oleo University. Since the Archeology Study Program at the University of Jambi was founded in 2014, the learning process in the Ancient Settlements course at the Archeology Study Program at the University of Jambi has emphasized a system of lectures, discussions, and occasional visits to archaeological sites around Jambi. The output of this course is very limited only to the knowledge gained by students. This learning model is considered old-fashioned and requires renewal and innovation. In addition to students being able to get updates on learning methods,

Project-based learning applications are a learning model in which students work on a project to gain an understanding of the material contained in the project being worked on (Patmanthara, 2016, p. 101). Learning activities are processes that involve lecturers and students to achieve an educational goal. Lecturers have an important role in teaching and

learning activities. Lecturers are not only limited to delivering material, but also play a role in planning learning, implementing learning and evaluating learning. This series must be carried out by applying the right learning model for students. The project-based learning process in ancient settlement lectures is able to stimulate student learning activities and increase student understanding of the material that must be captured. In addition, student learning outcomes also increase along with the application of this learning model.

The project-based learning model focuses on the core concepts and principles of a discipline, facilitates students to investigate, solve problems, and other meaningful tasks, is student-centered and produces tangible products (Rati et al., 2017, p. 62). The project-based learning model in ancient settlement courses is a learning model that involves focusing on problems in settlement cases in the past. This problem can then be solved by research conducted by each group. Every student individually or in groups is required to be able to make decisions related to the project they are doing. In addition, the process of searching for various reference sources in the literature as well as in the research process in the field provides opportunities for members to work collaboratively. The end result is a presentation of a tangible product in the form of a documentary that can be enjoyed not only by archaeologists, but also by the general public.

Project-based learning is the application of active learning (Eliyanti, 2018). In simple terms, project-based learning in ancient settlement courses is defined as a teaching that tries to link digital technology closely with the daily lives of today's students as a digital native generation. (Prensky, 2001), with problems that are often encountered in cases of settlement archeology (Feinman, 2015). In this project-based learning model, students are encouraged to be more active in lectures. Starting from determining the theme, to the final product produced.

According to Herminarto (2006), project-based learning has five criteria, namely: centrality, focus on problems, constructive investigation or design, student autonomy, and realism. (Herminarto, 2006). This means student-centered learning as a subject who must master material related to ancient settlements through the problems posed and then conduct research to seek evidence, investigation and analysis. Students can have the freedom to develop the results of their analysis and creativity in building solutions to problems related to settlement archeology encountered in their research. The results of this student's autonomous thinking can then be presented and discussed to lead to an appropriate and appropriate solution (Anita, 2017, p. 126). Therefore, besides having to think critically, students must also have good creativity in finding solutions to the problems posed.

CONCLUSION

Based on this research, an illustration is obtained that the current generation of "digital native" students find it easier to narrate research results through audio-visual media compared to textual narratives. Therefore, it is necessary that project-based learning methods begin to be applied to other lectures in the archaeological study program. This is because the science of archeology is always related to the past and it is difficult for ordinary people to understand directly. Therefore, the natural skills possessed by students in the current digital era must be utilized in order to provide a comprehensive explanation of the past to the public.

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