

## THE SITE OF SANGIRAN AS A MEANS OF HISTORY-LEARNING: AN EFFORT TO INCREASE STUDENTS' HISTORICAL AWARENESS

### SITUS SANGIRAN SEBAGAI MEDIA PEMBELAJARAN SEJARAH: UPAYA UNTUK MENINGKATKAN KESADARAN SEJARAH SISWA

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**Abstract.** History subject in secondary schools faces a number of challenges which may affect the efficiency of student learning outcomes. Several factors which influence such condition are the idea that history is less important than other subjects, lack of employing attractive educational methods and instruments, as well as limited facilities and learning resources in schools. An important aspect that needs to be reconsidered is the use of history-learning instrument beyond a classroom. This research explores the use of the archaeological site of Sangiran as a pre-literacy learning tool for junior high school students. This is a quantitative study which was carried out by a survey that involves the 10<sup>th</sup> grade high school students as research subjects. Sixty four students were divided into two groups, i.e. an experimental class consisting students who have visited the Sangiran site, and a control class of those who have not. The analysis indicates (sig 2 tailed) was 0.00 in the paired sample t test. Sig 0.00 is smaller than sig 0.05 (sig 2 tailed <sig 5-007). Thus, showing that the control class students did not share direct experience with historical material and passive learning activities. Consequently, they have not explored further the use of the Sangiran site as a means of learning. Students of the experimental class show better learning outcomes. The study concludes that learning history by visiting the Sangiran site can significantly increase awareness of the importance of history and encourage students' concern of the historical heritages.

Keywords: history, learning instrument, pre-literacy, high school, archeological site, Sangiran, museum

**Abstrak.** Mata pelajaran sejarah di sekolah menengah memiliki sejumlah tantangan yang dapat mempengaruhi efisiensi hasil belajar siswa. Beberapa faktor yang mempengaruhi kondisi ini, yaitu gagasan bahwa pendidikan sejarah kurang penting daripada mata pelajaran lain, kurangnya penerapan metode dan media pendidikan yang menarik, serta terbatasnya fasilitas dan sumber daya pembelajaran di sekolah. Aspek penting yang perlu dipertimbangkan kembali adalah penggunaan media pembelajaran sejarah di luar kelas. Penelitian ini mengeksplorasi penggunaan situs arkeologi Sangiran sebagai alat pembelajaran pra keaksaraan untuk siswa sekolah menengah pertama. Penelitian ini bersifat kuantitatif dengan menggunakan teknik survei yang melibatkan subjek penelitian siswa SMA kelas 10. Enam puluh empat siswa dibagi menjadi dua kelompok, yaitu kelas eksperimen yang terdiri dari siswa yang telah mengunjungi situs Sangiran, dan kelas kontrol dari mereka yang belum. Hasil analisis menunjukkan (sig 2 tailed) adalah 0,00 dalam t test sampel berpasangan. Sig 0,00 lebih kecil dari sig 0,05 (sig 2 tailed <sig 5-007). Dengan demikian diketahui bahwa siswa kelas kontrol tidak berbagi pengalaman langsung dengan materi sejarah dan kegiatan belajar pasif. Hal ini mengakibatkan mereka belum mengeksplorasi lebih lanjut penggunaan situs arkeologi Sangiran sebagai alat pembelajaran. Para siswa kelas eksperimen hasil belajarnya lebih baik. Penelitian ini menyimpulkan bahwa belajar sejarah dengan mengunjungi situs kuno Sangiran dapat secara signifikan meningkatkan kesadaran akan pentingnya sejarah dan mendorong perhatian siswa terhadap warisan sejarah.

Kata kunci: sejarah, media pembelajaran, pra keaksaraan, sekolah menengah atas, situs arkeologi, Sangiran, museum

## INTRODUCTION

History education plays a major role in formal schools. History and other subjects were compulsory in elementary and high schools. [Permendiknas](#) (a regulation issued by the Minister of National Education of the Republic

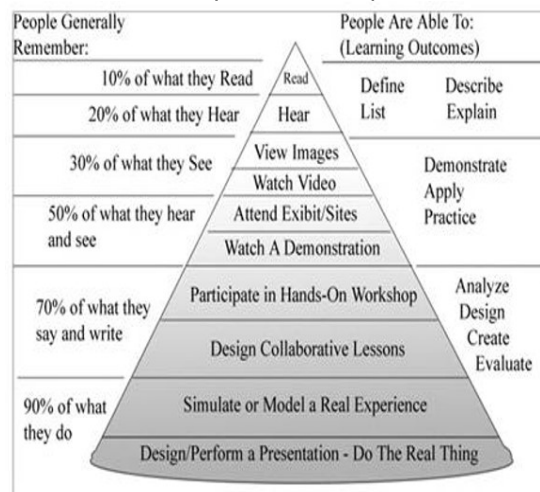
Indonesia) number 22 year 2006 has been released by the Government of Indonesia that states history subject concerns with, (1) establishing students' awareness on the importance of time and place, a process of the past, present, and future; (2) training students' critical forces to correctly understand historical

facts based on scientific approaches and methodologies; (3) fostering students' esteem and appreciation for historical heritage as the past evidence of the Indonesian civilization; (4) fostering students' understanding on a process of the Indonesian nation establishment through a long history and remains proceeding in the present and future; and (5) fostering students' awareness as part of the Indonesian nation who uphold a sense of pride and love for the country implemented in various life fields both nationally and internationally. This idea is in line with Dickens' opinion (cited in Manning 959) that a good history education fosters students' ability to construct the present condition by linking or seeing the past which is the basis of learning history. Through learning history, students are expected to be able to develop self-competencies to think chronologically and gain knowledge of the past events as a means in understanding and explaining the development and changes process in society and socio-cultural diversity which in turn enables them to discover and grow their national identity living amidst the world community. Teaching history increases students' awareness about the community groups' diversity, life experiences and different perspectives happened in the past to understand the present, gain knowledge and understanding to face the future (Isjoni 2007). Meanwhile, according to Kochar (2008), history should be taught to develop one's understanding and provide a precise image of the concepts of time, space, and society, and relation between the present and past. Additionally, history needs to be taught to educate students to have tolerance for differences in beliefs, loyalty, culture, ideas, and ideals, and in addition to broaden students' intellectual horizons.

To achieve the target of a history learning, an appropriate and effective strategy should be applied (Leo Agung 2012; McCombs 2017). In addition to the need for complete and easily accessible teaching materials, using reliable methods and helpful learning media can produce optimal learning outcomes and avoid monotoneous learning process. The use of effective learning media is quite important; it enables students to easily grasp the knowledge being transmitted through learning. Education media is all relevant to the transmission of

messages from sender to recipients that enhance their emotions, feelings, attention, desires and motivation in such a way that the learning process takes place to achieve the learning objectives effectively (Kozma 1991; Munadi 2013). Furthermore, learning media can either be tools of physical or non-physical forms intentionally used as an intermediary between teacher(s) and students, and help them to effectively and efficiently comprehend the learning materials. Learning media can be person, material, instrument, or event that enable students gain knowledge, skills, and good attitudes. Simply, teachers or lecturers, teaching books, and the environment are learning media (Sri Anitah 2011; Matijević 013; Smaldino 2014).

Knowledge will tend to be abstract if only transmitted verbally. For that reason, verbalism becomes inevitable. In other words, students only know about a word without knowing and understanding the meaning behind the word. Thus, any knowledge and information transmission through verbal language may reduce students' enthusiasm in grasping the understanding during the learning process. To understand the role of media in a process of learners' acquiring experience, Edgar Dale introduces a concept 'cone of experience'.



Source: Edgar Dale (cited in Arsyad 2014)

Figure 1 Cone of Experience

The cone of experience illustrates that students' learning experience literally undergoes a process of action or experience of what they are learned about, which engage the process of observing and listening through certain media and language.

Azhar Arsyad (2014) divided learning media into four groups, among others: (1) media produced by print technology, (2) audio-visual technology media, (3) computer technology media, and (4) an integrated media of print technology and computers. Teachers' skills in using media are the main criteria for the value and benefits of the media. Advanced technology media will be meaningless if teachers are unable to use it properly within the learning process. Similarly, using media as a learning tool is about an easy access. Learning media can be more effective if only the available media has been adjusted with the use. On the basis of its form and technique of using media, it is classified into ten types (Anderson and Collins 1988; table 1).

**Table 1** Anderson and Collins' (1988) media types

No	Groups of Media	Learning Media
1	Audio	<ul style="list-style-type: none"> <li>• Audio ribbons (rollers or tapes)</li> <li>• Audio disc</li> <li>• Radio (recorded broadcast)</li> </ul>
2	Print	<ul style="list-style-type: none"> <li>• Handbook/manual</li> <li>• Student worksheet (LKS)</li> </ul>
3	Print Audio	<ul style="list-style-type: none"> <li>• Exercise books completed with tapes or audio tapes</li> <li>• Ribbon, objects illustration completed with sound ribbon</li> <li>• Audio</li> </ul>
4	Visual Projection	<ul style="list-style-type: none"> <li>• Movie frame (slide)</li> <li>• String movie (completed with verbal messages)</li> </ul>
5	Visual Silence Projection with Audio	<ul style="list-style-type: none"> <li>• Movie sound slides</li> <li>• Soundtrack film</li> </ul>
6	Visual Motion	<ul style="list-style-type: none"> <li>• Silent film with title (caption)</li> </ul>
7	Visual Motion with Audio	<ul style="list-style-type: none"> <li>• Sound film</li> <li>• Video</li> </ul>
8	Object	<ul style="list-style-type: none"> <li>• Model/imitation (mock-ups)</li> </ul>
9	Humans and Environmental Resources	<ul style="list-style-type: none"> <li>• Historical sites</li> </ul>
10	Computer	<ul style="list-style-type: none"> <li>• Computer Assisted Instruction (CAI) program</li> </ul>

Source: adapted from Anderson and Collins 1988

The Sangiran ancient site is a potential teaching media for it contains various kinds of pre-literary historical information preserved millions of years ago. Unfortunately, not many schools have been able to use the Sangiran site

as a learning medium for various reasons. One of the reasons is that many schools use conventional textbooks and audiovisual learning media, for they are cheaper and need not require much time compared to visiting historical sites. Textbooks and audiovisual learning media enable teachers to be more focused on completing classroom's teaching requirements instead of spending time with students visiting the Sangiran site museum that need complex preparation.

The use of historical sites and museums as trustworthy media about history (Marcus and Kowitt 2016; Savenije and Bruijn 2017; Wosh 2018; Metzger and Harris 2018) shows several advantages. Historical sites and museums are not only effective as learning media to foster students' awareness of their cultural heritage (Witcomb and Buckley 2013), but also as a means to introduce and guide students to understand other cultures through a multidimensional approach and tolerance. These places can increase students' awareness of the importance of preserving cultural heritage (Karadeniz and Çildir 2017). Historical sites and museums are physical spaces constituted of various historical objects that can provide students learning opportunities and experiences that are not available at schools (Seeger, Wall and Herr 2016; Savenije and Bruijn 2017). Field visits provide students with opportunities to learn everything about historical sites and museums, such as other sources and institutions that not only present historical objects but also many learnable things. Developing students' abilities is significantly important and visiting museum is a challenge to learn history (Wessman and Heikkila 2018). It increases students' abilities in terms of analysing, interpreting, and evaluating primary and secondary sources, in addition to develop their awareness over the importance of history learning (Cherry and Sheffield 2010; Shehata and Mostafa 2017). Thus, museum provides students with important learning resources and a real experience towards historical evidences to gain better understanding in addition to be able to appreciate the historical works and human culture (Clark et. al. 2016; Shehata and Mostafa 2017).

The Sangiran site serves a significant role as a centre for palaeontology research, it is

popularly known as a museum preserving the abundant and varied fossils. Despite its popularity, ironically the Sangiran site may not be well known to students in many local schools, it has not become the main historical learning media in many schools. Textbooks of history widely used in both elementary and secondary schools. Being a national cultural asset acknowledged by UNESCO, Sangiran site should be better known among students in studying the history of Indonesian people. This study examines the use of Sangiran site as a learning media studying the pre-literacy history period of Indonesian people. This study specifically analyzes students' learning outcomes of history at the State Senior High School (Sekolah Menengah Atas Negeri or SMAN) 1 Sragen using the Sangiran site or museum as a learning medium.

This research investigates on how museums can be used as a means of prehistoric learning. This enables students to understand prehistoric periods effectively. Museum can surely be used as a means of learning to increase students' understanding of prehistoric materials. Museums are a complex media, helping students to get historical information. In addition to offer recreational aspects to students, the use of museums as a medium for learning history also provides visualisation, interpretation and widespread information on an event of history. Therefore, it is important to maximize the use of educational media in the form of museums in order to enhance students' comprehension of prehistorical artifacts.

## **METHODS**

The study was methodologically designed with a quantitative approach. The research subjects were students who had been divided into experimental and control classes, involving 60 of the 10<sup>th</sup> grade high school students of SMAN 1 Sragen, Central Java. The experimental class consists of students who have visited the ancient site of Sangiran, whereas the control class was the opposite. In the history-learning cycle, both control and experimental students obtained the same method which was the method of teaching. The data were obtained technically by implementing the survey method.

The survey instruments used interview and questionnaire techniques and was responded by 60 students; the survey was further divided into four classes. The first, investigated the facets of students' abilities and backgrounds. This dimension was used as a measure of students' awareness and study. In the second category, the statement was based on the openness of students toward historical research. The third category offered room for interpretations of students' interest in historical heritage. Finally, the fourth, a direct visit to the Sangiran site as a history learning process was a worthwhile learning tool focused on field trips. This study used interactive data analysis to look for common trends which include data collection, reduction and verification. Technically, data reduction used coding and categorization for each word or sentence of the questionnaire which addresses each topic relevantly. The data validation employed triangulation on the method by interviewing the selected respondents to ensure that the data were written correctly and in accordance with reality.

## **RESULTS AND DISCUSSION**

### **An Overview of Sangiran Archaeological Site**

The first important material introduced and explained to students were natural processes. Students were invited to directly observe the natural changes of the land of Sangiran since millions of years ago. The development of the Sangiran landform is related to the lifting process of Java Island in the past. Tectonic activity, sea tides, and volcanic activity for  $\pm 2.4$  million years ago were the geological processes contributing to shape Sangiran site. For approximately 2.4 million years, five land formations have been established in Sangiran, i.e. the Kalibeng formation (2.4 million years ago), the Pucangan formation (1.8 million years ago), Grenzbank (900,000 years ago), Kabuh formation (700,000 years ago), and the Notopuro formation (250,000 years ago).

The geological processes continues in Sangiran. About 100,000 years ago, sediment deformation occurred due to endogenous and exogenous movements, which created a giant dome. The previously formed sediment layers

followed the shape of the dome. The erosion that occurred at the top of the dome in the next stage had provided outcrops, which enabled the ancient sediment layers to be found on the present surface (Widianto 2011).

Next, students were informed about Sangiran's stratigraphy in a room that displays various types of fossils. First, the Kalibeng formation, 2.4 million years old, is the oldest sediment in Sangiran Dome, consisting of black-grey sandstone. The thickness of Kalibeng formation is more than 130 meters; among the identified fossils are the foraminifera and marine molluscs. In addition, there are also numerous gastropods and brackish water molluscs. This shows that the depositional environment was brackish water (a transition between salt and fresh water). Second, the Pucangan formation occurred during the Lower Pleistocene was around 1.8-0.7 million years ago. In this layer, many vertebrate fossils were found. In addition, fossils of the *Pithecanthropus erectus* and *Meganthropus paleojavanicus* skulls were also found. Other animal associations that coexist with these two ancient humans were the elephants, turtles, sharks, rhinos, etc. Third, the Kabuh formation is a soil layer occurred during the Middle Pleistocene age around 700,000-125,000 years ago. Many tools made of stone found in this formation. The discovery of stone tools shows us that the *Pithecanthropus* were hunting with stone tools to meet their daily needs. Fourth, the Notopuro formation, the soil layer formed during the Pleistocene period around 125,000-10,000 years ago. The Notopuro Formation is a layer formed by lava deposits and consists of andesite breccia and conglomerates (Widianto 2010; 2011).

The Sangiran site has various types of fossils of ancient animal and human such as (a) in the Kalibeng soil layer were found various types of marine fossils, among others were molluscs, shark teeth, sea turtle shells and coral; (b) in the Pucangan soil layer were found fossil animals with several species living in lakes and swamps or surrounding areas, such as river horses (*Hippopotamus* sp.), elephants (*Mastodon* sp.), Bovidae (cows, buffaloes, bulls) and Cervidae (deer); (c) in the Kabuh soil layer, there were various fossils of animals such as ancient elephants (*Stegodon* sp. and *Elephas* sp.),

cervidae, bovidae, rhinos (*Rhinoceros* sp.), pigs (*Sus* sp.), and tigers (*Panthera tigris*). This is the golden age of Sangiran which lasted more than 500,000 years; (d) in the Notopuro soil layer, there have never been found any animal fossils. This layer contains gravel, sand, silt and clay, as well as the insertion of lava, pumice stones, and tuffaceous mineral. This layer does not contain remnants of animals due to the absence of the available food sources (Widianto and Simanjuntak 2014; 2011).

Second, the rest of human remains. Ancient human remains were found only in both Kabuh and Pucangan formations. In such soil layers, there were found two types of homo (*Archaic Homo erectus* and typical *Homo erectus*). Broadly speaking, the findings of homo humans found in the Sangiran area were grouped into several types, among others (a) *Pithecanthropus erectus* II, discovered by von Koenigswald in 1937 in the Bapang hamlet, Bukuran village, Kecamatan Kalijambe, Sragen; (b) *Pithecanthropus* VIII, found in Pucung River, Dayu, Gondangrejo, Karanganyar; and (c) *Homo sapiens*, found in Ngrejeng hamlet, Somomoro village, Plupuh, Sragen.

Third, the remaining ancient plant remains, mostly in the form of wood fossils found in Jambu hamlets, Dayu village, and the tree trunks fossil found in Krikilan village in Kalijambe, in the clay layer of the Pucangan formation.

Fourth, the fossilized stone tools. Early humans lived in Sangiran used stone tools to sustain their lives (personal communication with regional government of Karanganyar). The numerous stone tools found in Sangiran including flakes and blades (knives for cutting or skinning hunted animals), flint stones, meteor stones, and chalcedony (Widianto and Simanjuntak 2014).

To easily manage and label the uniqueness of each fossil discovery location, the Sangiran site area is divided into four clusters and a single field museum. This presents scientific information in educational and informative way to inculcate students with a better understanding of the archaeological materials in Sangiran. First, the Krikilan cluster consists of the museum of ancient humans. This museum has three showrooms. Showroom I, displays information about the wealth of Sangiran; Showroom II, is themed with "life



processes" which presents the evolution of the universe creation to early human; Showroom III, is themed with the golden age of Homo erectus (500,000 years ago). In this showroom, a giant diorama of Homo erectus, other Sangiran, and Homo floresiensis statues are displayed. Second, the Ngebung cluster museum, consists only a single showroom divided into several chambers which each displays the development of archeological science at the Sangiran site from the period before the arrival of researchers. In the first chamber, visitors were presented with a diorama of excavation activities in Ngebung (several replicas of people). The second chamber displays the profiles of several foreign and local researchers who participated in developing the Sangiran site. The third chamber shows archeology in the academic world. In the fourth chamber there is a replica of a figure of an archaeologist in the Dutch colonial era who had examined the fossils in Sangiran. In the fifth chamber, displayed a replica of a large ancient elephant. Next to the replica, it is displayed animal fossils which were found in the Sangiran site. The animal fossils presented in the Ngebung cluster were those of the ancient elephant species, consisting three bone fragments, the vertebrae *thoracicae* (backbone) *Elephantidae*, a vertebrae *lumbales* *Elephantidae*, and a vertebrae *cervicalis* (neck bone) of *Elephantidae*, and several shells. Third, the Bukuran cluster museum displays theories of evolution. All material is presented in an interesting way through visually compelling graphics and interactivity. The drama and reconstruction of two human findings, namely Sangiran XVII and Sangiran II, are the main display in this section. Fourth, in the Dayu cluster museum, there are three types of display rooms, i.e. the shelter space, diorama space, and showroom. The shelter space is divided into three shelters, which are the Notopuro shelter, Kabuh shelter, and Grenzbank shelter. The diorama room displays early human hunting activities. In addition, the showroom also displays animal fossils divided into the animals' hip bones (pelvis) *bovidae*, *bovidae* tail bone (spine and vertebrae), mandibula *Stegodon pygmy* sp. etc (Widianto 2011).

Finally, the Manyarejo cluster museum is a field museum located in the middle of Sangiran site. The Manyarejo museum is dedicated to Sangiran residents and researchers. The Manyarejo museum displays an overview of how Sangiran residents and researchers worked cooperatively each time carrying out excavations in Sangiran. In other words, Manyarejo museum shows an intimate relationship between researchers with the Sangiran residents, beginning from the initial stage of the research, which is indicating the existing fossils to the stage of fossil excavation. The cooperative relationship between the two aimed at preserving the remnants of past life in Sangiran.

### The Evaluation Results

In this study, the target group is divided into two, the control and experimental classes. The control class consists of students who were not required to visit the Sangiran museum. In learning history, the control class only taught with lecturing method. Before conducting a trial to observe the differences in students' historical awareness before and after being given the treatment, a prerequisite test in the form normality and homogeneity tests were carried out. In the normality test (table 2), it was obtained that the sig 2-tailed data is 0.549, and 0.873 in the homogeneity test (table 3). Both normality and homogeneity tests show greater results than 0.05, therefore, the data is justified as normal and homogeneous (cf. Ghasemi and Zahedias 2012).

**Table 2** Normality Test Results Table

Kolmogorov-Smirnov's One-Sample Test		Unstandardized Predicted Value
N		32
Normal Parameters <sup>a,b</sup>	Mean	107,7187500
	Std. Deviation	9,48158521
Most Extreme Differences	Absolute	,141
	Positive	,141
	Negative	-,097
Kolmogorov-Smirnov Z		,797
Asymp. Sig. (2-tailed)		,549

a. Test distribution is Normal

b. Calculated from data

Source: researcher

**Table 3** Homogeneity Test Results

The Homogeneity of Variances

Pre-Posttest Results of the Control Class

Levene's Statistic	df1	df2	Sig.
,026	1	62	,873

Source: researcher

After fulfilling the prerequisite test, then a paired sample t test was conducted and the results (sig 2 tailed; table 4) were 1.00. Sig 1.00 is greater than sig  $\alpha$  of 0.05, which means there is no difference in students' historical awareness both before and after treatment. This means that the teaching of history through lecturing method cannot increase students' historical awareness.

Students in the control class acquired knowledge via only teacher's abstract explanations. As many as 32 students involved in the control class. They were not provided with much direct experience of historical and archeological remnants. The control class learning activities tended to be passively carried out without providing students an opportunity to explore more in the subject being taught. The presence of antipathy toward history, lack of sensitivity, and lack of enthusiasm for history lessons prove that students were less responsive to historical subjects.

**Table 4** Paired Sample Test Results

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
				Lower	Upper			
Paired Samples 1: Pretest Kelas Kontrol - Posttest Kelas Kontrol	-.031	,999	,177	-.392	,329	-.177	31	,861

Source: researcher

Meanwhile, the evaluation results on the experimental class show the opposite. The experimental class examined a classroom of 32 students, and all students had visited the Sangiran museum. After having a visiting experience to Sangiran site in the history learning subject, the experimental class showed positive results. It is known from the obtained result on the paired sample t test that is (sig 2 tailed) of 0.00. Sig 0.00 is smaller than sig 0.05 (sig 2 tailed  $<$ sig  $\alpha$ ). In other words, history learning method by visiting the Sangiran museum can

significantly increase the SMAN 1 (Sragen, Central Java) students' historical awareness.

## Discussion

Students were initially asked to define the concept of "museum" according to their own understanding. Students observed that a museum is a place to preserve and exhibit historical heritage, or a building to preserve historical and cultural heritage in artefacts or physical forms. Students were then asked about the functions of a museum. They replied that museums serve a role as a place to showcase various historical and cultural artifacts or as a place to store various collections of historical and cultural objects. Most students believed that museums greatly contributed to understand historical material taught in a classroom. In addition, museums enable students to participate in group work activities. A number of students argued that both Sangiran site and museum are helpful for them in understanding history of the Indonesian people. Visiting the archeological site and museum does increase students' sense of pride on the local potential heritages and the nation's history (Nagawiecki 2018).

After visiting the Sangiran site, students' understanding was reevaluated. The students were once again asked about the function of a museum. They answered that museum holds an important function as a place for preserving historical objects, a place to exhibit historical objects for the public, and as a means of historical education for the public. Some students reported also that the Sangiran museum exhibits various types of artefacts from the literay period, which is greatly beneficial for the wider community to comprehend the past, present, and future relationships. Indonesian as a nation has a long history that is traceable far back by observing the remnants of cultural artefacts stored and preserved in the Sangiran museum. The Sangiran museum and archaeological site which has been recognized by UNESCO is an institution dedicated to the people in general. It has been a destination reference for scientific study of history, research and entertainment.

The students who visited the Sangiran archaeological site, were initially given an overview of the Sangiran site. They were invited

to watch a film about Sangiran along with fossils stored in this area. They were then invited to observe the ancient humans' museums of Krikilan, Dayu, and other museums. Having observed the collection of ancient remnants in the display chamber, students felt enthusiastic and became familiar with the 'greatness of Sangiran', since they were able to imagine the life of early humans along with flora and fauna and the like. A visit to the site enables students to clearly understand several soil layers from which ancient fossil species were excavated. Such direct visits to the Sangiran site, is a way of learning history beyond the classroom which can really provide students with rich experience and explanation in addition to sustain their classroom learning. This visiting experience can instill students' pride for the historical heritages in Indonesia.

Increasing students' knowledge of the Sangiran site can enhance their awareness of the importance of the national heritage and culture. The growth of historical awareness encourages students to respect, preserve, and sustain the cultural wealth, and prevent the Sangiran site from being damaged. Thus, the Sangiran site that was registered in 1996 by UNESCO as a World Heritage Site (Sangiran Early Man Site) can still be maintained and preserved.

## CONCLUSION

The Sangiran archaeological site and museum are important learning medium for

senior school students in exploring the history subject, more specifically the Indonesian history of pre-literacy period. The results showed that implementing a visit as an effective history learning strategy to the Sangiran site, students' achievement and historical awareness were increased. The Sangiran site and museum is significantly relevant as a source of learning history since it stores various collections of both the original fossils and replicas. The evaluation results showed that having visited the Sangiran museum, students not only could increase their knowledge and understanding of the site and help them understand more about the history lessons at school, but also fostered their appreciation and awareness as partly a way in preserving the historical site. The Sangiran site and museum are concrete learning resources for students. By having a direct access to observe the actual objects used as learning sources and history learning media, students were gradually trained to think more conceptually and analytically. Students were given a lot of opportunities to directly comprehend the objects being displayed in the museum and enable them to observe the physical environment in which the historical objects were excavated. Students who have visited the ancient Sangiran site had a better historical awareness than those of the opposite.

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