

Interactive Learning Initiatives Utilizing Fossil Discoveries at Tambaksari Junior High School, Indonesia

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ABSTRACT

This study aims to show that interactive learning techniques can increase historical awareness amongst students. Using the interactive learning experience of searching for and categorising fossils in the local river bed by SMPN Tambaksari (hereafter referred to as Tambaksari Junior High School) students between 1980 and 1996. The historical method to select and evaluate both oral and written sources. The oral sources include interviews with the participants of the fossil digs. Written sources included news and magazine articles published during the time of the digs. The results show that the interactive teaching method was considered a meaningful and positive learning experience by students. Additionally, it was found that the students expanded their historical awareness by gaining an appreciation for the connection of history with the present and the future. Finally, there was a positive personal development for students, who learned about themselves and their relationship with their culture and nation.

Keywords:

Fossils of Tambaksari; Historical Awareness; Interactive Learning; Tambaksari Junior High School; Teaching method.

ABSTRAK

Penelitian ini bertujuan untuk menunjukkan bahwa teknik pembelajaran interaktif dapat meningkatkan kesadaran sejarah di kalangan pelajar. Penggunaan pengalaman belajar interaktif dengan pencari dan pengkategorikan fosil di dasar sungai setempat oleh siswa SMPN Tambaksari (selanjutnya disebut Tambaksari Junior High School) antara tahun 1980 hingga 1996. Metode yang digunakan adalah metode historis. Metode ini

digunakan untuk memilih dan mengevaluasi sumber lisan dan tulisan. Sumber lisan termasuk wawancara dengan peserta penggalian fosil. Sumber tertulis termasuk artikel berita dan majalah yang diterbitkan selama penggalian. Hasil penelitian menunjukkan bahwa metode pengajaran interaktif dianggap sebagai pengalaman belajar yang bermakna dan positif oleh siswa. Selain itu ditemukan bahwa para siswa memperluas kesadaran sejarah mereka dengan memperoleh apresiasi terhadap keterkaitan sejarah dengan masa kini dan masa depan. Akhirnya ada pengembangan pribadi yang positif bagi siswa, yang belajar tentang diri mereka sendiri dan hubungan mereka dengan budaya dan bangsa mereka.

Kata kunci:

Fosil Tambaksari; Kesadaran Sejarah; Pembelajaran Interaktif, Tambaksari Junior High School, Metode Pembelajaran.

1. Introduction

In this paper the author will describe how the events of the discovery of fossils in the area Tambaksari Ciamis. Interestingly, the discovery of the fossil was made by teachers and students of Tambaksari junior high school (Fosil Di Rancah Jeung Cililin, Tatar Sunda Beunghar Ku Titinggal Baheula?, 1984; Maryati, 2017). The discovery had an effect on students and the surrounding community, culminating in the construction of the Tambaksari Museum in 1995 (Agus, 2006). This paper will examine the impact of historical awareness on students at Tambaksari Junior High School. In contrast to the work of Kusuma et al., which emphasizes the Tambaksari Museum as a learning venue, this study aims to explore the process of fossil searching as an educational method during the years 1980 to 1996. (Kusumadewi, Pajriah, & Sondarika, 2022).

In theory, historical awareness can be formed by creating an active connection in the minds of students between historical facts, events taking place in today's society as well as forming a stronger connection with culture and heritage (Aisiah, Suhartono, & Sumarno, 2016; Nursalim & Hasan, 2023). This is related to the fact that the current state is a result of the past and can determine the future (Petrusenko, 2024a; Sartono, 1987). According to Sartono Kartodirdjo, historical awareness is a psychological representation in which culture plays a key role in shaping our understanding of the past. This consciousness emerges from individuals' reflections and perceptions of past events, which are influenced by human activities and serve to inform and enrich the present. (Nordgren, 2019; Suryana, Fajri, & Iswanto, 2020).

Historical awareness is needed in the framework of nation building and character building. Historical awareness cannot arise on its own, but needs to be cultivated. (Fitriani & Fatmariza, 2022). This process is an activity to stimulate and encourage a person in order to form an understanding and deepening related to values in all aspects of life, such as social, community and nationality. (Abdurahman & Badriza, 2021; Safak, 2024). The process of creating historical awareness can be carried out in stages and needs to take the implementation of learning. Learning that is carried out can be done formally or informally. (Cakranegara, 2020). When engaging with historical events, the

key question shifts from “how do we learn history?” to “how do we learn from history?” The former approach may result in a mere accumulation of data regarding past occurrences, while the latter encourages a deeper and more reflective mindset, encapsulating the true essence of historical consciousness. Therefore, adopting an effective learning method is crucial for enhancing our historical awareness, allowing us to extract valuable lessons from both the past and present, ultimately leading to informed decisions for the future. (Petrusenko, 2024a; Sartono, 1987).

Numerous studies have been conducted to identify effective learning methods that enable students to connect their studies with their environment, culture, and heritage, thereby enhancing their historical awareness. This paper will explore two significant studies. The first is the Value Clarification Technique (VCT) learning model, which employs four indicators to assess the level of awareness: (1) Knowledge of Historical Events, (2) Understanding of Historical Research Methods, (3) Significance of Historical Events, and (4) Practical Applications of History. The study was carried out with students from three schools that exhibited low scores on these indicators.

To effectively assess these indicators, the model integrates four key criteria: (1) evaluating the significance of the problem; (2) engaging students or group members; (3) promoting the seven stages of assessment, which encompass appreciating, strengthening, communicating, exploring various alternatives, considering consequences, making informed choices, and acting consistently; and (4) cultivating a safe environment that honors diverse perspectives without imposing values, thereby establishing a psychologically comfortable atmosphere.

The findings indicated that student awareness increased by 10 to 30%. As a result, the VCT model is considered appropriate for implementation in history education. It encourages educators to leverage the 2013 curriculum to create history lesson plans that prioritize independent learning. This approach fosters an environment that emphasizes freedom of expression, mutual respect, shared responsibility, and the effective use of technology. Ultimately, it empowers educators to adopt more innovative learning models. (Umami, Umamah, Sumardi, & Surya, 2022).

The second study focused on utilizing tsunami sites to enhance historical awareness. Conducted in Class VII at the State Junior High School in Sakti District, initial findings indicated that while some social studies classes employed a cooperative learning method, this approach was only applied to specific lessons. Most sessions adhered to a more conventional teaching style that relied heavily on Microsoft PowerPoint presentations. The research aimed to develop social studies learning materials that were more engaging than what was previously used. To achieve this, the study created audio-visual media based on content from tsunami sites. When employed effectively, audio-visual media can significantly enhance knowledge retention. The selected tsunami site was relevant to the local history, making it more likely to foster student learning. The study's results demonstrated an increase in historical awareness among the experimental group, indicating that tsunami site-based media can serve as a viable alternative to traditional history instruction in promoting students' historical understanding. (Suryana et al., 2020). The third research study explores the connection between historical awareness and cultural heritage literacy. It highlights the importance of historical awareness among high school students in Ambarawa who participated in cultural heritage conservation literacy programs. The findings indicate that engagement with the past can foster a new perspective in students' thinking about the future. Additionally, the study identifies several supporting

factors that can enhance historical awareness through literacy, including community involvement and the availability of supportive human resources. The research also offers recommendations aimed at increasing student engagement in cultural heritage conservation activities. (Petrusenko, 2024b; Yulianto, Wasino, Sutimin, Susanto, & Brar, 2024).

The three studies demonstrate that incorporating interactive learning methods into lesson plans can enhance students' historical awareness. The first study utilized the Value Clarification Technique (VCT), while the second employed the development of audiovisual media. This evidence suggests that the teaching and learning process should focus not only on the transfer of knowledge but also on the transmission of values. (Hidayat, 1999). It is essential to recognize that the study of history serves a didactic purpose, offering students insights from previous generations. Consequently, the teacher's role is to guide students through this learning journey, equipping them with tools and values that can be applied beyond the classroom in their daily lives.

Building on the findings of the previous two studies, this research aims to demonstrate an increase in historical awareness through an innovative approach—interactive learning methods. This represents a novel aspect of the current study. This paper will address three key questions: First, it will explore how interactive learning methods enhance historical awareness among students at Tambaksari Junior High School; second, it will characterize the type of historical awareness that emerges from these interactive learning methods; and third, it will investigate why the interactive learning process at Tambaksari Junior High School fosters historical awareness in its students. In order to limit the problem, the author uses indicators in explaining historical awareness. Indicators of historical awareness that will be seen in this study are formulated to include (Kochhar, 2008): appreciate the meaning and nature of history for the present and the future; know yourself and your nation; cultivate history for the development of national culture; and maintain the nation's historical heritage. These indicators emphasize the core of engaging with historical events. The crucial distinction lies not in "how to learn history," but in "how to learn from history." The first principle may lead us to a mere collection of data about past occurrences, while the second principle enriches our understanding, fostering a wiser and more discerning perspective—the essence of historical awareness. (Sartono, 1987).

2. Methods

2.1. Research Design

To describe research problem, this research used the historical method. The historical method is used as a structured set of rules in order to help collect historical sources, compare them critically and put them in writing to get the desired results (Herlina, 2020; Sjamsudin, 2007). The research method is a mechanism of historical testing and analysis in order to find authentic data so that it can provide historical information that is tested for validity (Maulana, 2023; Sulasman, 2014). In brief, these rules are carried out in four stages, namely heuristics, criticism, interpretation and historiography.

2.2 Data Collection

This study conducted a search for data derived from written sources and oral sources. Since 1990, written sources have been the primary source for historical research (Basundoro & Afdholy, 2023). Written sources are essential for substantiating historical events and facilitating historical writing. The sources utilized include magazines and contemporary newspapers. Specifically, reports on the discovery of fossils by students from Tambaksari Junior High School can be found in Galura magazine, Mangle magazine, and the Pikiran Rakyat Daily. Additionally, oral history is considered a valuable historical source in the realm of historical writing. (Bornat, Perks, Thompson, & Walmsley, 2000; Mandey, Luntungan, & Iroth, 2024). Oral history is considered to be related to memory and memories that have an orientation towards something in the past (Bazeyan & Aghanyan, 2022; Vichkitova, 2024). Oral history sources for this research were gathered by examining the scene at Junior High School Tambaksari in Tambaksari Village, Ciamis Regency. Primary sources include interviews with three students from Tambaksari Junior High School who attended between 1980 and 1996, as well as with science teachers involved in the fossil discovery and subsequent teaching about these fossils in Tambaksari Village. Multiple interviews were conducted to verify information and ensure the authenticity and credibility of the data collected.

2.3 Data Analysis

In contemporary historiographical writing, historical narratives have transitioned from purely descriptive accounts to more analytical approaches. This shift is linked to the innovative methodology introduced by Sartono Kartodirjo, which emphasizes a social science perspective in the study of history. The social sciences offer theories and concepts that help explain the reasons behind historical events, while historical research provides the data that supports these theoretical frameworks. (Bächtold, 2024; Maksum, 2015). It is believed by historians to turn the image of history into a scientific work (Hakim, 2018; Kartodirjo, 1987). In this paper, the concept used in interpreting the data is the concept of "challenge and response" from Arnold Toynbee. According to Toynbee, the development and progress of civilizations occurs through a cycle of interactions between the stimuli encountered and their responses to these stimuli (Hale, 2004; Zhilwan Tahir & Abdulwahed Jalal Nuri, 2024). In this context, the challenge is viewed as the process through which students discover fossils, while the response reflects the historical awareness that emerges from their efforts in searching for these fossils. The final stage is historiography. This writing is structured chronologically, outlining the sequence of events that begins with the fossil discovery process, followed by interactive learning, and culminates in the development of historical awareness. (Kuntowijoyo, 2003).

3. Results and Discussion

3.1 The Process of Finding Fossils Among Students of Tambaksari Junior High School in 1980-1996

The oldest prehistoric cultural products in the world, including the Indonesian region, are paleolithic tools (Umiyatun et al., 2022). These tools are thought to be supported by humans who live in simple hunting and gathering patterns (Pearce, 2012; Soejono, 1984). Based on the context of the findings, it can be estimated that the culture was supported by early humans of the pithecanthropus

type. This estimate is concluded based on the findings of the axes in one context with the *pithecanthropus pekinensis* fossils (Aziz, 2021).

In early 1962, a landslide occurred in Tambaksari, specifically in the Urugkasang area. When Darwa, born on July 9, 1941, visited the site, he was astonished to find large fish scales. He couldn't comprehend how fish scales could be present in such a rocky cliff area (lamping: Sundanese Language). Then, in late 1970, a second landslide took place, prompting Darwa to revisit the Urugkasang area. Upon his arrival, a relative who was farming in the nearby rice fields uncovered large bones that were deemed unusual. (*Interview with Darwa Hardia Ruhjana, Teacher of Tambaksari Junior High School, 2015*).

Following the two landslides that occurred around 1980, Darwa initiated an activity that invited students to explore the Cisodong River, located near Urugkasang. The river's close proximity to Tambaksari Junior High School made it an ideal location. The riverbed is firm, resembling concrete, and is composed of colorful mussel shells, with water that is clear and sparkling. Approximately 30 meters downstream from the mussels lies Curug Cisodong, a waterfall with a height of about 20 meters. Here, students were encouraged to appreciate the beautiful layers of soil on the waterfall's slope, which features seven distinct layers, each measuring approximately 1.5 to 2 meters thick. Areas rich in fossils can be found around the Cisanca River (Kaso Village), Urug Kasang (Tambaksari Village), Ciloa, and Kuta, as mentioned in Galura Magazine. Kasang (Tambaksari Village), Ciloa and Kuta. This is as written in Galura Magazine (Rohayati, 1992).

Darwa began to focus on the findings of strange objects by assigning his students to research the objects found whether they were animal, plant or of unknown origin. According to the research team, some of the strange objects are thought to be ancient animal fossils in the form of stegodon (ancient elephant), hippo fossils, ancient deer fossils and ancient fort fossils and stones that resembled historical axes (Taufieq, 1987)(*Interview with Iing, Student of Tambaksari Junior High School 1990-1992, 2015*). Strange objects that have been found by Tambaksari middle school students include Iing in the form of fossilized hippo bones in the Urugkasang area (*Interview with Iing, Student of Tambaksari Junior High School 1990-1992, 2015*).

The story was consistent with the news released by Mangle Magazine. In Mangle magazine, it was written, "Dina hiji poe aya murid manggihan bone nu geus mangrupa batu. Teu ngahaja eta mah estu kabeneran we." One day, there was a student who found a bone in the form of a stone. It was an accident, just an accident, Aut) (Fosil Di Rancah Jeung Cililin, Tatar Sunda Beunghar Ku Titinggal Baheula?. 1984).

According to the testimony of the Tambaksari Junior High School student, she said that her friend named Yayat Suryati found the fossil with her. "Muhun, si Yayat anu mendakan eta teh, langsung weh di ka Pa Darwa keun," (True, it was Yayat who found the fossil, then gave it to Pa Darwa, Aut). The discovery, according to Darwa as the supervisor, had a big impact on the psychology of the students. They became very enthusiastic and happy after discovering it. Perhaps for them the discovery was a source of pride (*Interview with Iing, Student of Tambaksari Junior High School 1990-1992, 2015*).

Searching activities that have been carried out repeatedly during class hours. Thanks to the perseverance, tenacity and fortitude of the students and the guidance of Darwa, the collection of ancient objects is increasing. In order to facilitate the collection of search results, Darwa as the supervisor has directed students to categorize the fossils found. Each student who has found fossils is guided to categorize their findings. Darwa divided five groups to make it easy for Tambaksari Junior High School students to learn. The groups are (1) vertebrate animal fossils; (2) mollusk fossils; (3) historical objects; (4) rocks; and (5) animal bones. Here are the results of the grouping of their findings (Soejono, 1984):

- a) The fossil group of vertebrate animals includes both large and small bones, as well as a variety of teeth, ancient deer antlers, hippo tusks, and stegodon teeth.
- b) The mollusc fossil collection consists of large and small shellfish, including mussels and snails.
- c) There is also a diverse group of historical artifacts, featuring numerous stone axes and sharpening tools.
- d) Additionally, the rock collection encompasses igneous rocks, sedimentary rocks, and metamorphic rocks.
- e) Finally, there is a group of animal bones including pig skulls, goat skulls, ape skulls, cat skulls, and various other bones. (*Interview with Darwa Hardia Ruhyana, Teacher of Tambaksari Junior High School, 2015*).

What was done by Darwa, according to T. Bachtiar (Bachtiar, 2005) was the integration of geotourism development into learning, namely making the surrounding nature a source of learning, as a grand laboratory, long before the competency-based curriculum was launched. Thanks to the perseverance, tenacity and fortitude of the students, the collection of ancient objects was increasing.

The discovery made by the students of Tambaksari Junior High School marks the beginning of new research. A researcher from the United States, Andrew Kramer, expressed interest in this finding. He noted that even the smallest discovery by these students contributes to our understanding of the range of fauna and early humans across the globe. In his writing, Kramer conveys his appreciation by stating, “This is the first fossil hominid recovered from West Java and one of the very few Indonesian hominids produced as a result of controlled excavation.” (Kramer et al., 2005). Meanwhile, Kramer has mentioned that one of the fossils found by Tambaksari Junior High School was the first fossil found from Pleistocene deposits in West Java. The fossil was named "RH 1 "Z "Rancah Hominid 1", which is a hominid or great ape incisor.

3.2 Interactive Learning through Fossil Discoveries at Junior High School Tambaksari

From 1980 until Darwa's retirement in 1996, field activities with students from Tambaksari Junior High School persisted. Following their initial discovery of ancient artifacts, the students exhibited a keen enthusiasm for continuing to search for more fossils and investigating their origins. Thus, their learning extended beyond the information provided by the teacher; it fostered a greater awareness, encouraging students to interpret historical events through ongoing research, exploration, and reporting on their findings. (Husband, Kitson, & Pendry, 2003). This is part of the management of students conducted by Mr. Darwa (Muntatsiroh & Asmendri, 2023).

Mr. Darwa's teaching reflects the principles of both the 1975 curriculum and the enhanced 1984 curriculum. The 1975 curriculum emphasizes effective and efficient teaching, while the 1984 curriculum focuses on the learning process. Consequently, this approach views students as active participants in their education rather than mere recipients of information. Mr. Darwa has effectively implemented this philosophy through techniques such as group work, discussions, and reporting. This approach is commonly referred to as Student Active Learning (CBSA) or Student Active Learning (SAL). (Asri, 2017; Chairunnisa, Tahir, Ramadhani, & Sadriani, 2024; Insani, 2019). This the article uses the definition of SAL put forward by Shroff et al. (2021) that argues that this learning allows students to extrapolate the learning strategies into a more compressive and motivated form of study. Thus the discovery of fossils and the consequent research by students allowed them to “express an underlying value and perception of the context for learning” as well as “generating a desire to positively contribute to the learning process and experience”. Forming the deeper connection of fossils and the historical context of the area (Aga, 2023; Shroff et al., 2021).

According to the results of interviews, students at Tambaksari Junior High School often perceive history as a dull subject. They believe that it mainly involves memorization, writing, and listening to stories, viewing it merely as a recounting of the past that holds no relevance for them. However, this perspective shifted following a fossil search activity. Notably, Darwa, who is a Natural Science (IPA) teacher rather than a History or Social Science (IPS) teacher, played a pivotal role in this transformation. One student from Tambaksari Junior High School remarked, “Padahal mah Pa Darwa mah sanes guru sejarah da, Pa Darwa mah guru IPA, tapi ni jadi resep ka Sejarah teh, rame, komo bari ka luar sakola mah dan asa teu nuju belajar.” (Even though Pa Darwa is not the teacher who teaches History, he is a science teacher, but we enjoyed History, especially when we were outside of school, as it felt like we weren’t studying). (Interview with Surwa, Student of Tambaksari Junior High School 1979-1981, 2015).

According to Darwa, his past teaching experience has led him to develop several key principles for effectively engaging with students. First, if a teacher speaks too softly and fails to convey points clearly, it can be challenging for students to grasp the material. Second, if a teacher monopolizes the conversation for an extended period while students remain seated without any change in position—essentially becoming passive listeners—students may grow fatigued, bored, and eventually sleepy. Third, if a teacher lacks energy and fails to inspire students or create a lively learning environment, it can result in students feeling disinterested and less attentive to the lessons. Lastly, Darwa emphasizes that information that is merely heard tends to fade quickly, while what is seen can be remembered for a longer time, and hands-on experiences leave a lasting impression. (Interview with Cicih Student of Tambaksari Junior High School 1981-1983, 2015).

The principle central to this study is the component of interactivity. By engaging students not only mentally but also physically—inviting them to move from their seats for learning activities outside the classroom, and sometimes even beyond the school environment—the content being taught is more likely to be retained. According to a student from Tambaksari Junior High School who experienced this teaching method during the years 1979-1981, Darwa's approach was highly enjoyable and enriched their learning experience by encouraging lessons outside the traditional classroom setting and directly in the field. (Interview with Surwa, Student of Tambaksari Junior High

School 1979-1981, 2015). According to Tambaksari Junior High School students Darwa was a favorite teacher, especially after guiding a lot of them in the process of finding fossils in his school (Interview with Cicih Student of Tambaksari Junior High School 1981-1983, 2015).

Mr. Darwa truly hopes that the exploration of fossils in Tambaksari will continue well into his retirement. He expresses a desire for many others to carry on this endeavor. One of his students shared that this sentiment is a recurring theme in Mr. Darwa's teachings; he emphasizes that the search for fossils should not cease once he retires. Since 1996, Mr. Darwa has noted that several organizations have supported the storage and research of fossil findings, including the Geological Museum of Bandung, the National College of Technology (STTN) in Yogyakarta, the Geological Development Center, and the Archaeological Center in Bandung. Furthermore, international assistance has come from universities such as the University of Tennessee and the University of Alabama in the United States. These institutions recognize the significant potential of fossil discoveries in Tambaksari, particularly those related to ancient animals. (Ruhjana, 2009).

3.3 Enhancing Historical Awareness through Fossil Discoveries at Junior High School Tambaksari

This demonstrates the fossil discoveries made by students from Tambaksari Junior High School. The concept of historical awareness was drawn from the research of Sartono Kartodirjo, who explores this idea by emphasizing the understanding of the past, the ability to articulate historical contexts, and the capacity to derive lessons applicable to both the present and the future. (Sartono, 1987). As a result, they are able to enhance historical awareness by appreciating the significance and essence of history for both the present and the future. This includes understanding themselves and their nation, fostering a cultural appreciation for history to support the nation's development, and preserving the historical heritage of their country.

3.3.1 Appreciating The Meaning and Essence of History for The Present and The Future

The initial concept of historical consciousness is the significance of past events. This significance represents the culmination of our understanding derived from past experiences. History is not merely about memorizing dates and events; rather, it seeks to explain the reasons behind these occurrences. Students' interpretations of historical learning highlight its importance as a fundamental subject. (Aisiah et al., 2016; Petrusenko, 2024b). Throughout the research period, students from Tambaksari Junior High School have been guided by Mr. Darwa, their science teacher. They have not only acquired knowledge but have also gained hands-on experience in the process of fossil exploration. According to Mr. Darwa, the students have been encouraged to appreciate the historical significance of their discoveries. He believes that the fossils they have uncovered are emblematic of a timeless past. The discovery of these fossils serves not only to reveal history but also to pave the way for future advancements in science. (Interview with Darwa Hardia Ruhjana, Teacher of Tambaksari Junior High School, 2015).

Darwa has emphasized the importance of remembering the past. It serves as a foundation for understanding our present and shaping our future. Just as fossils have been discovered, these remnants not only tell a story but also inspire students—those who study them are motivated to pursue knowledge. Below are the insights from the interview with Mr. Darwa.

“Alhamdulillah, sebetulnya bagi saya sebagai pengajar, penemuan fosil ini bukan sekedar mengetahui masa lalu, tetapi banyak mengajarkan kepada siswa siswi saya, ketika masa lalu itu ditemukan, masa lalu itu akan berharga, bisa membuat kita jadi semangat belajar, semangat mencari pengetahuan, jadi betul jangan melupakan Sejarah atau masa lalu, masa lalu itu berharga” (“Alhamdulillah, actually for me as a teacher, the discovery of this fossil is not just knowing the past, but it teaches a lot to my students, when the past is discovered, the past will be valuable, it can make us enthusiastic about learning, enthusiastic about seeking knowledge, so really don't forget History or the past, the past is valuable”).

In addition to Mr. Darwa, who served as a mentor by interpreting the past as inspiration for the future, the students who participated in the lesson shared similar sentiments. Initially, they underestimated the importance of studying History and examining the past. However, after discovering fossils that serve as remnants of history, they experienced a profound sense of joy and satisfaction that is difficult to articulate. Below is an account from one of the students who took part in the lesson with Mr. Darwa.

“Dulu saya ngerasa kalau masa lalu atau Sejarah itu ya sudah, Dongeng atau cerita saja. Ga ada efeknya buat saya. Tapi saat menemukan fosil bareng teman-teman, kemudian Pak Darwa menjelaskan apa yang kita temukan, saya teh ngerasa senang banget nemuin fosil yang dari jaman dulu, ternyata kalau masa lalu disimpen bener bener terus kita buka di masa depan, memang jadi sesuatu yang baik, saatos eta, abi resep pisan ka Pelajaran Sejarah, jeung moal deui ngalupakeun Sejarah” (“I used to feel that the past or history was just a fairy tale or story. It had no effect on me. But when I found fossils with friends, then Mr. Darwa explained what we found, I felt really happy to find fossils from a long time ago, it turns out that if the past is kept really well and then we open it in the future, it does become something good, after that, I like History lessons, and will not forget history”)(Interview with Ling, Student of Tambaksari Junior High School 1990-1992, 2015; Interview with Surwa, Student of Tambaksari Junior High School 1979-1981, 2015).

Mr. Darwa has observed a positive shift in how his students perceive history, particularly following their successful discovery of the fossil. He emphasized the importance of appreciating the actions taken today, as those actions will eventually become part of the past.

3.3.2 *Knowing Themselves and Their Nation*

Historical awareness is a psychological state that fosters an appreciation for the significance and essence of history as it relates to both the present and the future. This awareness is essential for cultivating an intellectual perspective on national identity. It enables individuals to grasp their self-understanding as a nation and to recognize their origins: a fundamental inquiry into who we are. (Salvetri & Supriatna, 2017).

In addition to recognizing the significance of the past for the future, Mr. Darwa emphasizes that this inquiry serves as a platform for students to discover their identities and understand their nation. The process begins as students investigate the nature of the fossils they encounter, uncovering how and why these fossils are located in that particular area. During recent meetings, several students posed questions to him, and Mr. Darwa noted that by asking these questions, the students developed a deeper interest in their origins. This curiosity is particularly

noteworthy given the interest from various stakeholders, including local government officials, both local and international researchers, as well as representatives from the regional and central governments. (*Interview with Darwa Hardia Ruhyana, Teacher of Tambaksari Junior High School, 2015*).

The students of Tambaksari Junior High School were surprised to learn that their excavation would capture the interest of others. Initially, they believed their discovery was merely an ordinary find that anyone could make; however, it turned out to be quite the opposite. A former student of the school noted during Mr. Darwa's explanation about the fossil that the finding might be a piece of ancient animal teeth. The fossils were unearthed in the Tambaksari area, which is known to contain geological remnants dating back 2 million years. Consequently, this region is recognized as a site of ancient life and habitats where large animals once roamed.

Thanks to Mr. Darwa's insights, the students of Tambaksari Junior High School have come to recognize their region as a rich and vibrant area, rather than merely a remote village. They take pride in being natives of Tambaksari Village, and their pride extends to West Java and Indonesia as a whole. They believe that the discovery of fossils in their area signifies that Indonesia is a remarkable nation, steeped in a long and rich history. She said, *ayeuna mah bangga jadi urang Tambaksari teh, da lain lembur. Baheulana ge tempat peradaban manusia, boga carita ayeuna mah Tambaksari teh*. (Now, I am proud to be a Tambaksari person, Tambaksari is not just a small area, but an area of human civilization, now Tambaksari has many stories)(*Interview with Cicih Student of Tambaksari Junior High School 1981-1983, 2015; Interview with Surwa, Student of Tambaksari Junior High School 1979-1981, 2015*),

Mr. Darwa, who is not only a dedicated teacher but also a proud native of Ciamis Regency—specifically from Tambaksari Village—takes great pride in his roots. This sense of pride is something he consistently instills in all of his students, as recounted by one of them.

“Pa Darwa mah pasti pas ngajar teh sok ngemutan, Hidep teh sing inget, neangan kikieuan teh lain ngan saukur ulin, atawa diajar di sakola, tapi kikieuan teh meh haridep barangga jadi orang Tambaksari, jadi orang Indonesia. Ulah sieun ku bangsa nu lain, da Bangsa Indonesia teh bangsa nu hade” (Mr. Darwa when teaching always reminds you, you must remember that this kind of search is not just a game or learning at school, but this search is done so that you are proud to be a Tambaksari person, to be an Indonesian. Never be afraid of other nations, the Indonesian Nation is a good nation)(*Interview with Surwa, Student of Tambaksari Junior High School 1979-1981, 2015*).

Thus, the process of finding fossils has become a space for students of Tambaksari Junior High School to be connected with their heritage.

3.3.3 The Development of The Nation's Culture

Historical awareness has led humanity to perceive itself as an integral part of history. Historical beings are understood as individuals capable of engaging in their communities, playing roles that shape events into history, or becoming historical actors themselves. Moreover, historical consciousness recognizes that humans are intrinsically connected to time. Every historical individual is one who comprehends the past in order to inform the future (Fitriani & Fatmariza, 2022).

The fossil search conducted by students from Tambaksari Junior High School has an indirect yet significant impact on the development of national culture. The fossils they have discovered are meticulously collected, documented, and stored, making them accessible to the wider community. These findings are housed in the school laboratory and serve as valuable teaching materials for Mr. Darwa. He believes that the preservation of fossils found by the students plays a crucial role in maintaining and nurturing the culture of the Indonesian nation. According to him, fossils represent important cultural relics that must be safeguarded, as they are part of the local heritage and will influence future generations of Tambaksari Junior High School.

Tambaksari Junior High School students when interviewed felt that their discovery during the learning process was one of the ways they developed the nation's culture. Here are the results of the interview.

“Alhamdulillah bu, saur Pa Darwa kapungkur, urang teh teu tiasa masihan nanaon ka bangsa negara Indonesia, tapi urang milari fosil pas Pelajaran ieu teh tiasa ngabanggakeun Bangsa Indonesia. Tos dipasihkeun terang kitu teh, abi janten sungguh sungguh pas malarian teh”. (Alhamdulillah ma'am, Mr. Darwa used to explain that we can't give anything to the Nation and State of Indonesia, but by looking for fossils during this lesson we can make Indonesia proud. After that I became serious when looking for fossils)(Interview with Iing, Student of Tambaksari Junior High School 1990-1992, 2015).

Students at Tambaksari Junior High School are experiencing the benefits of fossil searches, which inspire them to contribute to cultural development. Their enthusiasm and dedication during these searches is evident.

Mr. Darwa emphasized that this endeavor is not a professional excavation conducted by researchers. However, it serves as a foundation for future studies by researchers who share the goal of enhancing the culture of the Indonesian nation. This aspiration materialized when, in 1996, the Bandung Geology Museum conducted further explorations in the Tambaksari area. The arrival of the Geological Museum was warmly welcomed by Mr. Darwa and the students of Tambaksari Junior High School. The students proudly showcased the fossils they had collected, which were stored in the School Laboratory. This experience has deepened their appreciation for fossil searches, making them feel actively involved in the cultural development of the Indonesian nation.

3.4 Discussion

The findings of this study confirm that active learning can lead to significant historical advancements among students at Tambaksari Junior High School. This process was implemented by a science teacher, Mr. Darwa, who guided students in discovering fossils in the area surrounding the school. These results may support previous research conducted by Suryana et al., which highlights the importance of historical consciousness through interactive historical learning. While Suryana et al. utilized a museum focused on tsunamis as an active learning medium, this study employs exploration-based activities as its form of active learning. (Suryana et al., 2020). One notable aspect of this study is the suitability value as perceived by students of Tambaksari Junior High School. Specifically, the students demonstrate an understanding of the significance of history in relation to

the present and the future, an awareness of their cultural heritage and national identity, and a curiosity for further developing their nation's culture. The VTC learning model utilizes four key indicators: identifying historical events, recognizing historical research methods, analyzing historical events, and interpreting historical contexts. (Umami et al., 2022).

This study aims to demonstrate that the suitability assessment among students at Tambaksari Junior High School does not occur in isolation. It is closely linked to interactive media research, quality learning practices, active learning methods, and collaborative learning among students. This process leads to the development of a theory of challenge and an affirmative response to Arnold Toynbee's theory. (Hale, 2004; Mahamid, 2022; Zhilwan Tahir & Abdulwahed Jalal Nuri, 2024). The challenge in this case arose when students discovered fossils of ancient animals during their science studies with Mr. Darwa in 1980. The first discovery was made by Yayat Suryati, who promptly shared it with Mr. Darwa. In response to this exciting find, Mr. Darwa, along with the students of Tambaksari Junior High School, took several steps.

Firstly, they continued excavations in areas believed to still harbor fossils, with students actively participating in these efforts during each lesson. This initiative persisted until Mr. Darwa's retirement. Secondly, the excavation process was transformed into an active learning experience, involving students in categorizing and researching their findings. (Shroff et al., 2021; Siyam, Siyam, Hussain, & Alqaryouti, 2025). Third, it is essential to invite relevant stakeholders to assist in the follow-up of fossil discoveries, thereby enhancing the quality of the students' research. These stakeholders include the Museum of Geology, Balai Arkeologi Bandung, as well as universities from both domestic and international institutions, particularly those from the United States.

The students' response to the active learning methods was markedly positive. Firstly, they regarded history lessons as enjoyable and productive learning experiences. Secondly, there was a noticeable increase in their awareness of historical concepts. Based on interview findings, three key aspects of historical awareness were evident among the Junior High School students.

First, they expressed a deep appreciation for the past, recognizing that learning history is essential. They understand that the past should not be forgotten or dismissed; rather than mere fairy tales or stories, it holds significant value for both today and the future. Second, students at Tambaksari Junior High School take pride in being part of the Tambaksari Village community. They feel a sense of pride when foreign visitors show interest in local discoveries, reinforcing their identity as Indonesians and acknowledging the greatness of their nation. Third, the students feel that they contribute to the development of Indonesian culture. Overall, the responses from Mr. Darwa and the students at Tambaksari Junior High School reflect a positive outcome from the challenges presented in their education.

4. Conclusion

This research has demonstrated that historical awareness develops when students grasp the historical values and contexts of past events and how these shape the present and future. Participants in an active learning experience, specifically in the discovery and excavation of fossils, not only enhanced their own historical awareness but also fostered a deeper connection to their community

and culture in a meaningful way. The hands-on experience of discovering and categorizing fossils has a direct impact on the preservation of history.

Based on historical research methods, this study concludes that the active teaching process between 1980 and 1996 fostered historical awareness during a period when active learning was not yet incorporated into the curriculum, as noted in recent studies by Suryana et al. Throughout 2020, as well as by Umami, Umamah, et al. in 2022, and Yulianto et al. in 2024. This latest research underscores that assessing historical awareness is an ongoing process facilitated by educational media. Therefore, one could argue for the exploration of the positive effects of active learning methods. The fossil discovery initiative undertaken by students at Tambaksari Junior High School serves as a teaching methodology that warrants follow-up research from various stakeholders at multiple levels. This could provide a foundation for further exploration of other active learning methods, such as museum exhibits and tourism, which can enhance both local and broader historical awareness. Additionally, further research by cultural institutions is essential to identify the most effective ways to leverage this increased historical awareness for the greatest positive impact on society.

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