The Publication of the Results of Archaeological Research Through Comics and Animated Movies: The Opportunities and Challenges

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ABSTRACT
Comics and animated movies have become one of the most appealing to teenagers and children in addition to being the trend in digital era. Meanwhile, the findings of archaeological researches are interesting materials, many of the animation and comics used archaeological themes such as Indiana Jones, The Mummy, Tomb Rider, Atlantis: The Lost Empire, Tintin, Gerbang Neraka, and many more. The fact, is that Indonesia has abundant archaeological remains, yet not known among teenagers and youngsters. To introduce and attract them, an interesting discourse on archaeological results should be made. The topic of this research is to find out the way to utilize the archaeological results in comics and animated movies in Indonesia. This research was analytical descriptive by using inductive reasoning. The research stages covered data collection, analysis, and conclusion. From the research, it was found that many findings of archaeological researches in Indonesia were adopted in movies and animation. While many archaeological researchers have used comics and animation, the public also has used the technology using archaeological findings. The use of comics and animated movies in archaeology would attract youngsters to get to know archaeology. Archaeology is potential to audience target of popular culture in Indonesia as many youths have pride in their culture while being curious about their ancestral culture.

Keywords: Archaeology, comic, animated movies.

1. INTRODUCTION

Archaeology is the study of the past through the remains of material culture. Archaeological remains can be in the form of artefacts, ecofacts, features, buildings, and sites that are unique, rare, and cannot be renewed. Indonesia has a variety of archaeological remains. Research to explore this potential has been actively carried out by agencies engaged in archaeology, namely The National Research Centre of Archaeology and the Regional Agency for Archaeological Research.

The results of archaeological studies are widely published in scientific journals and research reports. However, knowledge about archaeology has not reached the majority of the community which results in a lack of understanding of archaeological remains of their cultural heritage. Meanwhile, efforts to preserve cultural heritage can only work well if the community has an understanding of cultural heritage and its preservation. Giving understanding is done through an effective communication process. The message conveyed is expected to be received with a good understanding and encourage action to participate in efforts to preserve cultural heritage (Amril, 2016).

Publication of archaeological research is important so that the public can know and feel the benefits of the research (Nurlia, 2018; Susantio & Faizaliskandiar, 1985). Based on the KBBI, publication means an announcement or publication, in this case, the publication of research results. Publication of research papers can be popular, popular-scientific, and scientific (Nashihuddin, 2017). Advances in communication technology have changed everything, including research publications. Research publications in the 90s were published in print, but now publications are more effectively done online (online). The publication can be open or closed and is a form of the responsibility of the researcher to report to the public about what and the possible impacts of the research conducted (Timotius, 2017).

Technological advances encourage archaeology to adapt including publication methods according to
circumstances. Archaeologists are required to be more creative in presenting the world of archaeology to the public with its various segments. Archaeological objects are placed as product-knowledge, meaning that archaeological objects are messages whose values need to be identified, not only displaying the objects but also the messages contained in them (Widodo, 2012).

In archaeology, there is the term public archaeology, namely the theory or strategy and how cultural heritage can be spread widely and enjoyed as well as understood by the community. Public archaeology is very important and strategic to organize and regulate cultural heritage in the current era. Community participation is needed to keep cultural heritage recognized and it's meaning understood so that public archaeology is required to be able to convey messages in a way that attracts attention, using short everyday language, solid, and communicative (Sulistyanto, 2018).

Raising public awareness is one of the most effective ways to protect cultural heritage. To achieve this goal, it is necessary to first identify the stakeholder groups and how to influence each group. The minds of each group can be mobilized to support the protection and management of cultural heritage in this way (Manders et al., 2012; Pasaribu, 2018).

Knowledge about archaeology among teenagers and children is currently still minimal. This is because archaeology is not popular. Learning at school has not touched on archaeology. Meanwhile, introducing archaeology from an early age is very important considering that they are the nation's successors who need to recognize archaeological remains as part of history, identity, and culture. Most of them only know the popular archaeological remains such as Borobudur Temple, Prambanan Temple, and others, while there are many archaeological remains in Indonesia. Knowledge of archaeology is also related to conservation efforts, for example when they visit archaeological remains they can find out appropriate and inappropriate behaviour in preservation, such as not committing vandalism.

Archaeological publications are mostly in the form of scientific journals and research reports with heavy discussions, public are difficult to accept and understand. These conditions prevent them from gaining an understanding of archaeology, as well as efforts to preserve archaeological remains. Therefore, a special strategy is needed to introduce archaeology to them with an easy-to-understand narrative.

One trend that is very popular among teenagers and children is comics and animated movies. Comics and animated movies present unique stories with attractive visual appearances so that they do not get bored in listening to the stories and information conveyed. If archaeology is put into the form of comics and animated movies, it will certainly provoke their interest in knowing archaeology.

As stated above, the lack of concern for the preservation of archaeological remains is due to a lack of knowledge and understanding of archaeology. Therefore, knowledge about archaeology and its conservation efforts needs to be disseminated to the public, especially teenagers and children as the nation's next generation. The existence of comics and animated movies that have become a trend among them can be used as an opportunity to convey archaeological information. Referring to the problem above, this article will discuss the publication of the results of archaeological research into comics and animation. Through comics and animation, it is hoped that information about archaeological remains can reach out to teenagers and children.

Research on the use of archaeological research results through comics and animated movies is very important because there has been no previous research that has discussed this. In addition, not many have used the results of archaeological research in the creative industry. The results of archaeological research made in the form of comics and animated movies so far have only been carried out by government agencies (Puslit Arkenas/ Centre for Archaeology, and Centre for Preservation of Cultural Heritage/Direktorat Jenderal Kebudayaan), still little has been done by private parties. This article will also provide an overview of the opportunities and challenges of archaeological publications through comics and animated movies.

2. METHODS

This research is descriptive-analytical research that aims to make a systematic, factual, and accurate description of the facts and characteristics of a particular population or area (Suryabrata, 2018). This study uses inductive reasoning, which moves from the study of facts or specific symptoms, then concluded as general symptoms or empirical generalizations (Tanudirdjo, 1989).

The data collected through the desk research method, namely the collection of data and information through examination and analysis of data and information using secondary data without taking data directly in the field. Desk research was conducted on comics and animated movies that were sourced from the results of archaeological research. The data was traced from the website and you tube of the National Archaeological Research Centre and Regional Agency for Archaeological Research. The analysis was conducted to determine the opportunities and challenges of disseminating archaeological information through the media of comics and animated movies. The results of data collection and analysis are then concluded.
3. Research Result

Comics and animated movies are forms of popular culture. Popular culture initially developed in Europe assumed to be an inherent culture with the lower classes. Popular culture is also often associated with the term mass culture, which is mass-produced and mass-consumed as well (Subaktio & Ida, 2012). Popular culture is dynamic which always moves to a place, is created or modified in every social transmission (Fisher, Maryanne L., 2012) so that popular culture changes rapidly. Popular culture is a product of industrial society, meaning activities and their results are produced and displayed in large numbers, with the help of production, distribution, and mass-copying technology so that they are easily accessible to the wider community (Heryanto, 2012). Popular culture is becoming a very warm trend to be discussed in the digital era and great demand by children and teenagers.

The comic is a form of visual communication media that has the power to convey information in a popular and easy to understand manner. The seeds of comics in Indonesia have emerged since ancient times through the media, such as reliiefs and wayang beber (Balai Bahasa Kalimantan Barat, 2016). Comics combine images and writing that are strung together in an image storyline. The text in comics is more understandable and the plot is easier to follow and remember, so that information more easily absorbed by the reader. Comics have functioned as an entertainment medium that can be equated with various other types of entertainment such as films, television, and cinema (Waluyanto, 2005).

Comics in Indonesia have been known since the colonial period in the 1930s. Comics were originally published in newspapers, in subsequent developments emerged Indonesian comics with superhero themes. Comics in Indonesia in 1960-1979 raised the theme of cultural heritage, one of which was comics with the theme of wayang. The stories that are raised include the stories of Ramayana, Gatotkaca, and Mahabaratha as well as puppet stories that were popular in the era of comic artist R.A. Kosasih. Wayang comics are now hard to find, only reprints of past comics (Soedarso, 2015). The world of Indonesian comics has been in a near-death phase since the 1990s. Indonesian comics were revived in 2000s to the ease of internet access and the development of social media (Novitasari, 2016). The factors cause the near-death phase of comics in Indonesia include; (a) an invasion of comics from outside like, comics from Japan (manga). (b) the rise of audio-visual media with the emergence of private television stations. People prefer to follow stories by watching rather than reading (Balai Bahasa Kalimantan Barat, 2016).

The second form of popular culture discussed in this article is animated movies. Animation comes from the Latin anima which means soul, life, and spirit. Animation is a two-dimensional image that seems to move, because of the ability to store or remember previous images (Vega, 2004). Animation can be interpreted as a technique of making audio-visual works based on the timing of the picture. Images have been assembled from several pieces of moving images that look real (Makhroyani, 2013). The anime was first created in 1907 with a motion picture duration of only three seconds, which figure of a boy holding and lifting a hat as a sign of respect. Ten years later, in 1917, Oten Shimokawa appeared a silent animation work with a duration of five minutes through an anime entitled Imokawa Mukuzo Genkanban no Maki (CNN Indonesia, 2020).

Animation in Indonesia was initially used as a media campaign for political purposes. Seeing the prospects of animation in the advertising field, in the early 1970s, many animators were sent abroad to study animation. 2D animated movies have begun to develop and are produced in line with computer technology since 2000. Indonesian animated movies have been developed and produced in 3D and shown in series and feature films until now (Tanjung, 2018).

Archaeology is an interesting theme to be processed and explored in popular culture (Pop Culture). Archaeology can be entered into Indonesian Popular Culture, it will provoke the interest of children and teenagers to get to know archaeology. Archaeology has the potential to target popular culture audiences in Indonesia because teenagers in Indonesia have pride in their culture and are curious about ancestral culture. It's just that not many popular media such as comics and animations present this theme. Several foreign films with archeological themes such as Indiana Jones, The Mummy, and Tomb Rider are selling well at the Box Office. Animated movies with archaeology themes such as Atlantis: The Lost Empire produced by Walt Disney, as well as many animated characters who work as archaeologists. In addition, the theme of archaeology is also raised in the Tintin comic, which is very popular and has a large collection in the library.

There are still a few comics and animations in Indonesia that carry the theme of archaeology. The Indonesian comic that uses references to the colonial era in Indonesia is Wonder Boven published by Ciayo. In its visuals, there are many illustrations of indies buildings in Batavia. This is a challenge to popularize rchaeology in Indonesian popular culture, especially comics and animation because these themes are rarely processed by people.

The utilization of the results of archaeological research in the form of comics and animation in Indonesia has only been carried out by government agencies. The National Research Center of Archaeology (Puslit Arkenas) and Regional Agency for
Archaeological Research (Balai Arkeologi) through the program of “Rumah Peradaban” produces animated movies, documentaries, comics, and interactive games about the results of archaeological research. These contents can be downloaded for free through their YouTube channel.

These government agencies have published several comics and animated movies with archeological themes. The National Research Center of Archaeology (Puslit Arkanas) published the comic ‘Kisah Airlangga’ which tells about Airlangga in building his empire. The comic was compiled based on the results of research on the inscription data from the period of King Airlangga (1019-1042) with the title Sri Māhāraja Rakai Halu ri Dharmawangsa Airlangga Anantawikramatunggadewa found in Lamongan Regency.

Regional Agency for Archaeological Research in D. I Yogyakarta Province (Balai Arkeologi Provinsi D. I Yogyakarta) published the comic ‘Liyangan: Sepenggal Kisah Dari Balik Kabut Sindoro’ which discusses the results of the findings of archaeological research at the Liyangan Site. This comic presents information about the archaeological remains of the Liyangan Site, the origin of the discovery of the site, as well as the research process at the site.

Regional Agency for Archaeological Research in South Sulawesi (Balai Arkeologi Provinsi Sulawesi Selatan) published the ‘Petualangan Toala’ series which tells of Toala's adventures in visiting various sites in South Sulawesi. Petualangan Toala has reached nine series until now. Some of the sites that become objects in the comics are ancient tombs in Maros, Mallawa Site, ancient rock-art painting sites in Maros, Batang Matasapo Site, and others.

Regional Agency for Archaeological Research in North Sulawesi (Balai Arkeologi Provinsi Sulawesi Utara) also published a comic entitled ‘Waruga: Kubur Batu di Minahasa’ which tells the journey of three children, namely Toar, Pingkan, and Riedel who accidentally find a mysterious object, namely waruga. This comic provides information about waruga and functions in the Minahasa community. The second comic published by the Archaeology Center of North Sulawesi Province (Balai Arkeologi Provinsi Sulawesi Utara) is ‘Petualangan 4 Anak Pemberani: Aksi Heroik Penyelamatan Tinggalan Arkeologi di Bumi Minahasa’ which tells the story of Titi, Limbat, Ering, and Sembung who visit the forest and witness the theft of archaeological remains. This comic provides an overview of the legal process that will be followed if someone steals an artefact.

The animated movies about the results of archaeological research include the animated movie Archi published by The National Research Centre of Archaeology (Puslit Arkanas). Archi animation is currently published in three series. The first series tells about being an archaeologist. The next series tells about Archi’s adventures to archaeological sites in Indonesia, precisely in Jatiluwih and Lake Matano.

Regional Agency for Archaeological Research in North Sumatra Province (Balai Arkeologi Provinsi Sumatera Utara) launched an animation entitled ‘Kisah Orang Gayo’ which tells about the arrival of three groups of people who brought different cultures to the Gayo Highlands, in Loyang Mendale, Aceh Tengah District. The group came from the Mesolithic era to the classical era. This animation is based on the research results in Gayo for ten years. Regional Agency for Archaeological Research in D.I Yogyakarta Province (Balai Arkeologi Provinsi D.I Yogyakarta) published the animated movie of Arcil which tells the story of Arcil’s adventures in visiting archaeological sites including Bumiayu and Fort Van den Bosch. Previously, in 2020 it had launched the animated movie Liyangan Site.

Regional Agency for Archaeological Research in North Sulawesi (Balai Arkeologi Provinsi Sulawesi Utara) launched an animated movie entitled ‘Bangunan Kolonial Suksi Sejarah Peristiwa 23 Januari 1942’, which tells about the liberation of Gorontalo from the hands of the colonialist. This liberation event was led by Nani Wartabone and is known as Patriotic Day. The historic moment was marked by the flying of Bendera Merah-Putih in front of the Post and Giro Office Gorontalo. The second animated movie is ‘Kubur Batu Sangihe’ which tells about the tradition of stone graves carried out by the people of the Sangihe Islands, North Sulawesi which has been going on since 1720 – 1780 years ago. This animated movie also provides an overview of the value of gotong-royong and religion contained in the removal of gravestones. This year, Regional Agency for Archaeological Research in North Sulawesi is planning to produce an animated movie about the origins of the Minahasa people, namely the chain of events that began with the marriage of Titi Kusnadi and Meri. In the story, Titi Kusnadi from Tomani eventually became the founder of the Tito Kingdom, which is widely known as the Tito Kingdom. The title of the animated movie will be ‘Peta dan Dama’. The development of the animation is currently in progress and is planned to be published at the beginning of the next year.
Sulawesi also planning the release of the animated movie of ‘Petualangan Arkacili’.

Figure 2 Animated movie ‘Kubur Batu Sangihe’
(Source: https://www.youtube.com/watch?v=Bj9ZS35jdPo )

Besides, there are not so many comics and animated movies produced by the private sector. One of the best-selling comics is The Cartoon History of the Universe by Larry Gonick which was translated into several languages, one of which is Indonesian with the title ‘Kartun Peradaban’. Moreover, in history learning, many historical comics of the struggle of the Indonesian people have been published, for example, the comics of Ki Hadjar Dewantara, Cut Nya’ Dien, and R.A Kartini. Animated movies made by private parties can be accessed from the Inspect History channel which makes animations about the glory of Majapahit.

The comics and animated movies published by the National Archaeological Research Centre and the Archaeological Centre generally provide information about archaeological remains in Indonesia, as well as conservation efforts, and the legal process that applies when destroying archaeological remains.

4. DISCUSSION

4.1. The Opportunity of Publication of Archaeology Through Comic and Animated Movies

Comics and animated movies are one means of conveying messages, ranging from the delivery of daily life to messages or political criticism that is happening in the community. This became an opportunity to develop the publication of archaeological research results through comics and animated movies in the future. As a trend among teenagers and children, comics and animated movies have become an interesting means to introduce archaeology.

Entertaining content is the hallmark of comics and animated movies, which are highly enjoyed by them. Comics and animation can be educational tools that entertain and add insight. Comics can be used as educational media because they have a big influence in giving readers a quick understanding of educational things. Comics serve to convey messages, provide value in the educational journey towards mental, reasoning, and spiritual intelligence (Maharsi, 2011; Soedarso, 2015).

The visual display becomes an attraction that they do not get bored in listening to the stories and information conveyed. The delivery of the story is not only text, but is made in attractive, easy to understand, and understandable images. Information in visual form is very easy to understand by teenagers and children, so the messages displayed through these media can be received easily.

Animated movies and comics are creative media that can be used to describe events that have occurred as reminders and learning media. Archaeological finds can inspire the appearance of a style of image or form in comics and animated movies. The location of the archaeological site can be used as a background story. The form of archaeological objects that are usually unique and interesting to watch. This attracts the audience’s curiosity to know objects that are not from this period. Archaeology provides many visual references to serve as a medium for reminders and learning with an attractive appearance.

Stories of experience and mystery are also the main attraction of the archaeological theme. People tend to want to know something unfamiliar but close around them. The discovery of archaeological remains, adventures, and challenges to reach the location, and the research process can also be an interesting story. Comics and animated movies can simulate this into a story with an attractive appearance.

Comics and animation are suitable media to introduce archaeological remains because it is easier to process these objects without involving the original object. In addition, preserving the remains is no need to come directly and could avoid vandalism. The information conveyed in the comics is the introduction of archaeological remains, and to efforts to preserve archaeological remains which are presented interactively and visually attractive can be easily understood.

Ease of access to comics and animated movies is also a supporting factor. Publishing comics currently does not have to be in the form of a book (hard copy), but can be done in the form of an electronic book (e-book) that can be uploaded to the website. One of the publications of comics in the form of electronic books is https://www.ebookanak.com, which publishes many books and comics in various types.

Archaeological comics published by the National Archaeological Research Centre (Puslit Arkenas) and the Archaeological Centre (Balai Arkeologi) can be accessed through the websites of each agency. Whereas, animated movies have been published through the
YouTube channels of each agency. The production of historical animated movies has also been carried out by several private parties in the form of short films uploaded on YouTube channels.

Comics and animated movies can be disseminated through social media, more people can see them. The level of visitors depends on each agency in promoting it through social media (Facebook, Instagram, and Twitter). Institutions that do not have a creative team or their creative team is less active, the channels are certainly not as busy as the active ones.

### 4.2. The Challenge of Publication of Archaeology Through Comic and Animated Movies

The above description has provided an overview of the advantages of comics and animated movies as a medium for conveying messages and information about archaeology. The publication of archaeological research results in the form of comics and animated movies is currently still limited to government agencies (The National Research Centre of Archaeology and Regional Agency for Archaeological Research), only a few are carried out by the private sector. Certainly, in the future, it is expected that more comics and animated movies will take the theme of archaeology. The more archeological themed stories that are raised, the more familiar and popular the theme will be.

Making comics in terms of human resources requires the involvement of archaeological researchers and creative people. Researchers act as content providers and suppliers of information through the publication of their research results. Creative people make the visual display of information more attractive. Creative people need references for story materials, visual object designs, and visual style concepts that will be displayed. Collaboration is very possible to make comics and animated movies.

Another factor that is the key to the success of delivering messages and information in comics and animated movies is the character. Characters are not only actors but also ideological representations of their creators as messengers and ideas. Therefore, the characters are designed with their own and different stories to make them easy to remember and able to communicate with the audience with a certain visual language (Soedarso, 2015; Tillman, 2011). Character design has begun to be applied in animated comics by The National Research Centre of Archaeology and Regional Agency for Archaeological Research. The characters carried are children’s characters more adapted to the audience.

Content of comics and animated movies need to pay attention to authentication problems because comics and animated movies can be fictional stories. The addition of fictional elements can make the narrative of the story more interesting and exciting. Archaeological remains can be processed into narrative stories with many developments, such as the story of the discovery, the conflict to get the object, the value of the object that it is contested. On the other hand, to prevent confusion of information, the academic information can be explained in a separate narrative can be distinguished from the fictional part.

For creative people and the private sector, making archeological themed works can also affect income. Comics and animated movies can be uploaded to social media are easily accessible. The more access, the easier will get followers and the greater opportunity to earn. This can inspire and provoke other creative people to load works with archeological themes.

### 5. CONCLUSION

Publication of the results of archaeological research is important, because people can get to know archaeology and use it. Archaeology is important, people can know their attachment to archaeological remains can play a role in preservation. Archaeological publications are generally in the form of research reports and scientific journals that have not yet touched the public, especially children and adolescents. Thus, a special strategy is needed to introduce archaeology to them.

Comics and animated movies are a trend and much favoured by children and teenagers. Comic content and animated movies are entertaining and can be a means of education as well as entertainment. The display of comics is not only in the text, but also images are easier to understand so the messages displayed through these media can be received easily. By raising the theme of archaeology in comics and animated movies, it will make it easier for them to understand archaeology. Generally, the information conveyed in them is the introduction of archaeological remains to conservation efforts.

Publication of the results of archaeological research through comics and animated movies has so far been limited to government agencies, with few being carried out by the private sector. In the future, it is hoped that there will be more comics and animated movies with archaeological themes. The more archaeological themed stories are raised, more familiar and popular the theme will be. Some of the things challenge in making comics and animated movies are human resources that need to involve research and creative people. Content creation also needs to pay attention to characters and authentication issues so that archaeological information can be conveyed clearly and not mixed with fiction.
REFERENCES


