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A Preliminary Survey on the Awareness of the Existence of Megalithic Culture and the Need for the Digitisation

Tinjauan Awal tentang Kesedaran Kewujudan Budaya Megalitik dan Keperluan Pendigitalan

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ABSTRACT

Megaliths are remnants of the cultural heritage of the local community in Malaysia that are no longer practiced in the lives of today's society. Nonetheless, They are important monuments in archaeological and historical studies, providing important insights into the life and beliefs of ancient societies. The use of traditional data storage methods, limitations in information sharing and delivery, and lack of public awareness of existing megaliths have caused have caused these structures to be increasingly lost and forgotten in today's world. Therefore, this study aims to identify the level of respondents' awareness of megaliths in Malaysia and user requirements to digitise information on megalithic culture, especially in Negeri Sembilan. This study conducted a preliminary survey, with a questionnaire serving as the data collection instrument. This survey included 70 respondents from the Faculty of Social Sciences and Humanities and the ICT Center at Universiti Kebangsaan Malaysia (UKM), selected using the purposive sampling approach. The data obtained were analyzed using IBM SPSS Statistics version 28. The findings of the study showed that 56% of respondents knew about the presence of megalithic stones in Malaysia and it indicating a moderate level of knowledge and awareness. In addition, this survey highlights the high need and demand for digital information with 100% of respondents agreeing that the dissemination of information today is more effective through a digital approach. These findings will guide the next phase of this study, specifically, the development phase of digital technology application. Hopefully, the effort will raise awareness among the new generation on the importance of preserving the megalithic cultural heritage.

Keywords: Cultural heritage; digital preservation; feasibility study; megalithic; preliminary

ABSTRAK

Megalitik adalah tinggalan warisan budaya masyarakat tempatan di Malaysia yang tidak lagi diamalkan dalam kehidupan masyarakat masa kini. Walau bagaimanapun, ia merupakan monumen penting dalam kajian arkeologi dan sejarah, memberikan pandangan penting tentang kehidupan dan kepercayaan masyarakat purba. Penggunaan kaedah penyimpanan data tradisional, keterbatasan dalam perkongsian dan penyampaian maklumat, serta kurangnya kesedaran awam tentang megalitik yang ada telah menyebabkan megalitik semakin hilang dan dilupakan dalam dunia hari ini. Oleh itu, kajian ini bertujuan untuk mengenal pasti tahap kesedaran responden terhadap megalitik di Malaysia dan keperluan pengguna untuk mendigitalkan maklumat mengenai budaya megalitik, khususnya di Negeri Sembilan. Kajian ini menjalankan tinjauan awal melalui soal selidik sebagai instrumen pengumpulan data. Melalui kaedah persampelan bertujuan, seramai 70 responden terdiri daripada pelajar di Fakulti Sains Sosial dan Kemanusiaan dan kakitangan di Pusat Teknologi Maklumat, Universiti Kebangsaan Malaysia (UKM) telah terlibat dalam tinjauan ini. Data yang diperoleh dianalisis menggunakan IBM SPSS Statistics versi 28. Dapatan kajian menunjukkan bahawa 56% daripada responden yang mengetahui akan kewujudan batu megalit di Malaysia dan dapatan awal ini menunjukkan bahawa tahap pengetahuan dan kesedaran masih di tahap yang sederhana. Di samping itu, tinjauan ini menyoroti keperluan dan memperlihatkan permintaan yang tinggi terhadap pendigitalan maklumat kebudayaan megalitik dan 100% responden bersetuju bahawa penyebaran maklumat hari ini lebih berkesan melalui pendekatan digital. Dapatan kajian ini dapat membantu kepada fasa seterusnya, khususnya fasa pembangunan aplikasi teknologi digital. Diharapkan usaha ini akan dapat meningkatkan kesedaran terhadap pemeliharaan warisan budaya megalitik kepada generasi masa kini.

Kata kunci: Tinjauan awal; pemeliharaan digital; kajian kesedaran; megalitik; warisan budaya

INTRODUCTION

Megalithic culture is a unique heritage for Malaysian states practicing it, including Negeri Sembilan. The passage of time and rapid modernization in today's world have caused such heritage to be increasingly forgotten. This study found that there are several gaps related to megalithic culture, such as the use of traditional data storage methods, limitations in information sharing and delivery, and lack of public awareness of existing megalithic culture have caused megalithic culture to be increasingly lost and forgotten in today's world. Although megalithic culture is no longer practiced in the lives of today's society, it is nevertheless an essential element of archaeological and historical research, providing vital insights into ancient societies' lives and beliefs.

The purpose of this study is to determine respondents' understanding of megalithic remains in Malaysia, as well as the necessity to create a digital information application to share information on Malaysian megalithic culture, particularly in Negeri Sembilan. A preliminary survey conducted through a questionnaire is the method of data collection used. At the same time, this study also identifies the forms of digital materials that are the needs and preferences of current respondents. This is an effort in preserving the existing megalithic culture in Negeri Sembilan through an information technology approach by developing digital applications in line with current technological developments.

LITERATURE REVIEW

MEGALITHIC CULTURE IN NEGERI SEMBILAN

Megalithic originates from two Greek words: 'mega' meaning 'big' and 'lithos', which means stone. Thus, 'megalithic' refers to one or more big stones used to build a structural building for special purposes in societal life (Jusoh et al. 2018; Masdey et al. 2019; Ramli et al. 2019; Samsudin 2015). Negeri Sembilan Darul Khusus is one of the states in Malaysia, which has a unique cultural heritage, including megalithic culture. However, the passage of time and modernization have caused the megalith stone heritage to become increasingly forgotten (Mahadzir et al. 2021; Kong and Eboy 2021).

Culture encompasses the racial identity that characterizes the function of a particular society, including ethnic groups (Lim et al. 2021). Megalithic stone is also known as 'living stone' by people practicing it. The concept of a living stone is based on the belief that a stone can grow in length and width as if it has a 'spirit' and is alive (Jusoh et al. 2018; Sabin et al. 2018; Saludin 2020). According to previous studies and works, megalithic culture and tradition in Negeri Sembilan can be divided into several perspectives and functions. In this regard, a megalithic stone is be regarded as a living stone, marker stone, boundary stone, gravesite or tombstone, meeting place, ritual, a symbol of social status or a wishing stone (Arbi, 2017; Malan 2017; Jusoh and Sauman 2017; Rashid 2017). Megalithic stones in a settlement area indicate that the community once practiced customs and culture related to megaliths. However, as people's lifestyles evolved over the years, this culture has become increasingly forgotten and gradually lost its significance in the local community.

Previous studies revealed that megalithic culture was once actively practiced by some communities in Malaysia. Although it is not as grand and popular as the stone structures found in Stonehenge in England or Rapa Nui in Easter Island, Malaysian megaliths are unique. They represent the diversity of the Malaysian cultural heritage, and they should be listed as national treasures that need to be preserved for future generations.

The studies on the megalithic culture in Malaysia are not necessarily novel. One of the first studies on megaliths in Negeri Sembilan was conducted in 1919 by Evans. More recent studies include Adi Taha, Mahfuz Nordin and Hasnol Mohamed (Jusoh et al. 2018; Ramli 2020). Despite the number of studies conducted on megaliths, the megalithic culture pointed out that rapid development in recent years has threatened the existing megalithic areas and settlements (Jusoh et al. 2018). Furthermore, the lack of exposure to these valuable treasures has resulted in information about these traditions and cultures not being disseminated among the public.

Furthermore, most findings from these studies are not published to the public. This statement is also in line with Ramli (2020), who stated that documents and reports, some of which are kept abroad, make it difficult for the local community to access. Ramli (2020) agreed that information on megalithic sites and findings of prior studies are mostly available in hard copies, and there is a lack of digital mapping of megalithic sites in Negeri Sembilan.

Based on the findings of megalithic sites in Negeri Sembilan, most of the discovered sites are located within the Luak Tanah Mengandung region.

The latest discovery by the archaeological team from Insitute of the Malay World and Civilisation, Universiti Kebangsaan Malaysia (UKM) at the megalithic site in Luak Tanah Mengandung successfully recorded a total of 126 sites with 4,223 megalithic stones (Ramli et al. 2019) as shown in Table 1.

This number is expected to increase because, during the study, several constraints were encountered, including megalithic sites that had been abandoned and hidden in the bush, inaccessible areas due to the absence of landowners or heirs, and limited information available. Therefore, this paper is an initial effort to document and digitize the findings through a preliminary survey as a study of awareness and requirements for the digitization of megalithic information. Figure 1 shows some of the megalithic stone remains in several settlement areas around Luak Tanah Mengandung, Negeri Sembilan.

TABLE 1. The number of Megalithic sites and Megalithic stones in Luak Tanah Mengandung (Ramli et al. 2019)

Luak	Total Sites	Total Stone
Terachi	38	1840
Ulu Muar	56	1640
Gunung Pasir	7	330
Jempol	22	395
Inas	3	18
Total	126	4223

Megaliths in Kampung Ulu Inas, Inas

Megaliths in Kampung Jerjak Seberang, Jempol

Megaliths in Kampung Tanjung Ipoh, Ulu Muar

Megaliths in Kampung Padang Biawas, Gunung Pasir

Megaliths in Kampung Terachi, Terachi

FIGURE 1. Megaliths in some village area of Negeri Sembilan, Malaysia.

This study also agrees with García-Fernández et al. (2015), who stated that archaeologists are not only travelers looking for hidden artifacts; the reality is more prosaic because the field of archaeology not only involves restoration, analysis, and interpretation but also exhibiting artifacts left by previous societies through the folds of history to the present generation. These include megalith stones and megalithic culture. In this regard, the dissemination of information about forgotten cultures and practices will be even more effective and widespread if it is displayed and shared through current technological approaches.

DIGITAL PRESERVATION OF CULTURAL HERITAGE

Cultural heritage encompasses customs, practices, places, artistic expressions and values that express a community's way of life and are inherited from one generation to another (Mat Zin et al. 2016). It is undeniable that cultural heritage, specifically tangible heritage worldwide like megaliths, often faces natural and anthropogenic threats (Dhonju et al. 2018). Unfortunately, some communities nowadays do not recognise their local cultural heritage (Manuho et al. 2018). This shows a need to use information systems to disseminate knowledge and promote understanding of cultural heritage in line with current technology (Mahadzir et al. 2024). UNESCO (2021) described heritage as a legacy from the past, what we live by today, and what we pass on to future generations. Thus, digital heritage consists of computer-based materials from various communities, industries, sectors and areas or regions with lasting value that should be preserved for future generations.

Digital heritage technology will certainly not be able to replace monuments that have been lost, but its advantage is that it can give visitors more than just an idea of the object or monument on display. The ability to assess the actual dimensions contributes to the "thorough immersion" of the audience into the actual monument space (Nikonova and Biryukova 2017). Such software products provide the ability to change virtual images of cultural heritage objects that may prevail over their real images in our consciousness in the future.

Wang et al. (2020) stated that the high availability of digital information would increase sustainability and value of both tangible and intangible cultural heritage. It could help preserve heritage over a long period, making it more accessible and widely presented to the public. At the same time, it facilitates in-depth research in the future. This is in line with Bachad et al. (2015), who stated that cultural heritage documentation involves acquiring, recording and communicating the data needed to determine the position, shape and size of monuments in the past found at archaeological sites locations. Therefore, information about megalithic stones needs to be well documented to ensure that the preservation and conservation of megalithic stones can be carried out properly, then this information can be used as a source and reference for the future (Mahadzir et al. 2024).

Abdelmonem (2017) noted that since the evolution of digital modelling in the 1990s, graphics, information visualisation platforms, and virtual environments have led to the development of new theories and empirical methods to approach archaeology issues and heritage preservation. Harun and Mahadzir (2021) posited that the rapid growth of technology had created innovations in various fields, including information and communication technology (ICT), making information universally

accessible online. The rapid development of ICT has impacted all existing sectors, including archaeology and heritage preservation. In this regard, the megaliths discovery by archaeologists and research findings should be shared and presented to the public, especially through digital applications. This notion coincides with Ibrahim et al. (2018) and Salih et al. (2019), who stated that digital applications form a foundation for the rapid development of information technology which has created changed how people live worldwide.

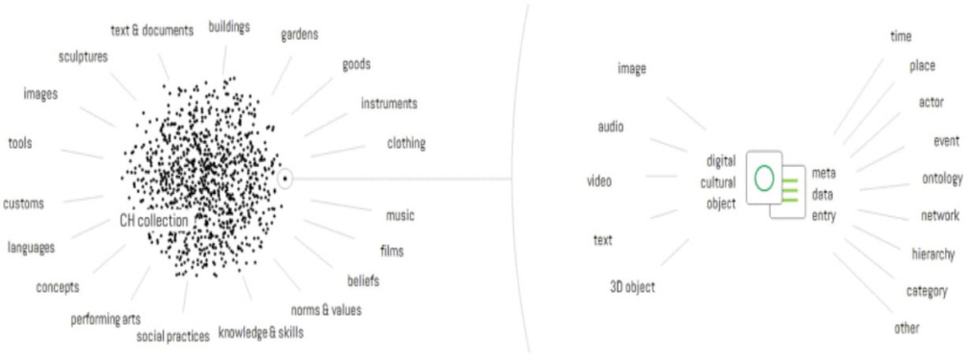


FIGURE 2. Visualization of Cultural Heritage Collection Data
Types of cultural objects and assets (left-hand side), with tangible CH at the top and intangible CH at the bottom. The right-hand side shows a close-up of the structure of CH object data, consisting of a digital cultural object (left) and related metadata entries (right).
Source: Windhager et al. (2019)

In ensuring the long-term preservation of the sustainability of cultural heritage digitally, Windhager et al. (2019) have classified the visualization of cultural heritage data collection as illustrated in Figure 2. The left-hand side is the type of cultural heritage objects and assets, which are also divided into two parts, the top is a tangible heritage object while the bottom part is an intangible heritage object. On the right-hand side shows the data structure that can be represented by each cultural heritage object, which consists of a collection of digital artefacts such as photos, audio, video, text and 3D objects. Meanwhile, the relevant metadata entries for each heritage object are such as time, place, actor, event, ontology, network, hierarchy, category and others. In the situation of this study, this megalithic study is involved in both tangible and intangible heritage objects. The conceptual visualisation of cultural heritage collection data by Windhager can be applied in the preparation of questionnaires in this study and subsequently for the development of megalithic cultural digitization information of Negeri Sembilan.

The literature review found that the development of applications for digital information sharing could help the preservation of cultural heritage. This method allows information about cultural heritage to be kept and disseminated online. It also allows the large-scale preservation of cultural assets and provide information can be accessed by the public regardless of their location (Windhager et al. 2019). Therefore, this study presents an initial step to identify the need for developing a digital application as a source of information in preserving the megalithic heritage in Negeri Sembilan.

METHODOLOGY

This study adopted the quantitative approach. A preliminary survey was conducted to collect relevant data for further research. A questionnaire was used as an instrument for data collection. Non-random purposive sampling was used to choose the study's respondents as it allows the researcher to select respondents with specific needs and characteristics (Saran Shantikumar 2018). The survey's respondents encompassed 70 students and staff. The students are undergraduate students in the Faculty of Social Sciences and Humanities who are majoring in History and English studies. At the time of data collection, the English Studies students were undergoing industrial training at the Institute of the Malay World and Civilization, UKM.

This study selected students from higher education institutions because they are adolescents who frequently utilize digital information and the

internet. This is in line with previous researchers such as Hashim and Omar (2011) and Hargittai and Hinnant (2008), who involved adolescents as respondents in studies involving the use of the internet. Apart from university students, this study also involved staff members from the ICT Centre, UKM as respondents to obtain feedback from adult internet users who frequently use computers in their daily work. In line with Kate (2019) who stated that selected participants or respondents should be realistic users of the product or service being studied, such as users who will use the product or service, even if the user is not yet a real user of the product.

The questionnaire consisted of ten questions and was divided into two parts (A and B), the first part contained the background information of the respondents while the second part consisted of questions related to the megalithic as shown in Table 2. Images of megaliths, as shown in Figure 3 were displayed to respondents to give them an overview related to the megalithic stone before they answered the megalithic questions further.

FIGURE 3. Example of a megalithic image

TABLE 2. Preliminary Study Question Outline

Section	Item
A. Demographics of respondents	1. Respondent Details Gender, Age, State of Birth, Current State, Sector of Employment/ Study
B. Questions Related to Megalithic Information	1. Have you ever seen a megalithic stone like this? [(a) Yes, (b) No]
	2. If yes, where do you see it?
	3. Do you know about the existence of megalithic stones in Malaysia? [(a) Yes, (b) No]
	4. To the best of your knowledge, in which state was this megalith found? [-Johor, -Kedah, -Kelantan, -Melaka, -Negeri Sembilan, -Pahang, -Perak, -Perlis, -Selangor, -Pulau Pinang, -Sabah, -Sarawak, -Terengganu,]
	5. How did you find out about the information? [a) Oral (Storytelling), b) Printed media, c) Electronic media]
	6. Do you agree that the dissemination of information today is more effective through digital methods? [(a) Agree, (b) Disagree]
	7. Are you interested in getting more information about megalithic stones in Malaysia? [(a) Yes, (b) No]
	8. What form of information do you prefer? [a) Fact text, b) photos, c) Location map, d) Videos, e) Papers/ Brochures, f) Forums/ Discussions, g) Others (Specify)]
	9. What factors interest you to know more about megalithic culture in Malaysia? [a) Adding Knowledge, b) want to know the relics of cultural heritage, c) like to explore information, d) others (Specify)]

The data obtained were analysed using IBM SPSS Statistics version 28. Basic descriptive analysis, specifically percentage and frequency were conducted. The quantitative data obtained was also visualised through tabular analysis and graphs to help readers interpret and understand the preliminary survey findings. In addition, this study conducted a cross-tabulation analysis to illustrate the relationship between respondents' demographic variables (age level and respondents' category) and between the level of interest in megalithic information and respondents' category.

RESULTS AND DISCUSSION

DESCRIPTION OF RESPONDENTS

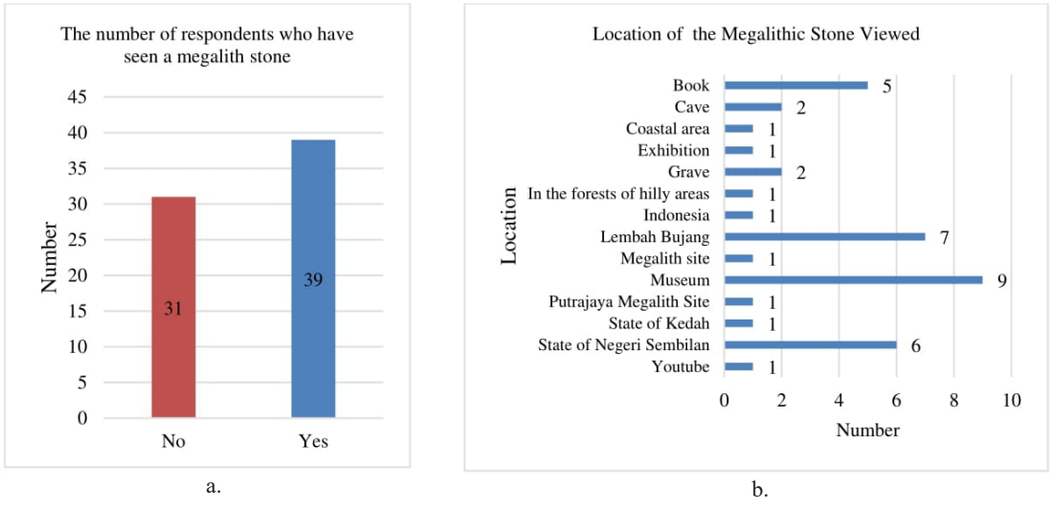
70 respondents were involved in the survey, and they consisted of 37 UKM students and 33 staff members. Out of the 37 students, 11 respondents were English studies students while 26 were history studies students. The respondents come from four age categories: 18-29 years old, 30-40 years old, 41-50 years old and 51 years old and above, as shown in Table 3. The students range in age from 18 to 29 years old. Meanwhile, a majority of the staff members range in age between 30 and 40 years (N=18) and 41-50 years old (N=12).

TABLE 3. Description of Respondents

Age	History Students	English Studies Students	Staff Members	Total
18-29	11	26	2	39
30-40	0	0	18	18
41-50	0	0	12	12
51 & Above	0	0	1	1
Total	11	26	33	70

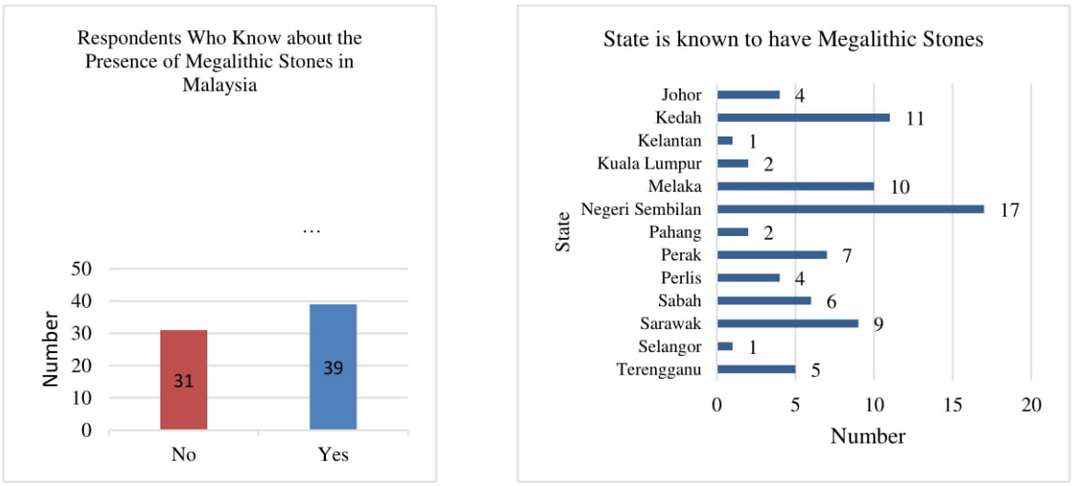
AWARENESS OF MEGALITHIC STONES' EXISTENCE

The survey indicates that 56% or 39 respondents have seen megalithic stones while 44% or 31 respondents have never seen megalithic stones, as shown in Figure 4 (a). Respondents who answered 'yes' to this question were required to answer the next question on where they saw megalithic stones. As shown in Figure 4 (b), the question reveals that the respondents who responded that they had seen a megalith stone may have seen an actual megalith. These responses might be inaccurate as some of them mentioned locations with no recorded megalithic stone sites or archaeological findings. For example, seven individuals reported seeing megaliths in Lembah Bujang, while one claimed to have seen megalithic stones along the coast. Both areas do not currently have a record of megalith stones and require further study.



a. b.

FIGURE 4. (a) The number of respondents who have seen a megalith stone and (b) Location of the megalith stone viewed



a. b.

FIGURE 5. (a) The number of respondents who know about the presence of megalithic stones in Malaysia, (b) State is known to have Megalithic Stones

The number of respondents who have seen megalithic stones in the previous question are in line with the responses in this section which probes about the respondents' knowledge about the existence of megalithic stones in Malaysia. As shown in Figure 5 (a), 56% of respondents know about the existence of megalithic stones in Malaysia while 44% otherwise. The figure shows that the respondents who have seen megalithic stones were those who know about the existence of megalithic stones in Malaysia. Referring to classification of the respondents' level of knowledge and awareness by (Zaidi et al. 2021) as shown in Table 4, the survey shows that the respondents' knowledge and awareness of the existence of megaliths in Malaysia was at a moderate level.

TABLE 4. Classification of respondents' level of knowledge and awareness

Classification	Percentage
Low	<30%
Moderate	31-59%
High	>60%

In the next questions, the respondents who answered 'yes' to knowing the existence of megaliths in Malaysia were required to name the state where there is a presence of megalithic stones. The respondents were allowed to select more than one states. Figure 5 (b), illustrates that some responses were less accurate. Based on previous discovery records, megaliths were recorded in Negeri Sembilan, Melaka, Perak, Sabah, Sarawak and several sites in Selangor (Arbi 2017; Masdey et al. 2019; Ramli et al. 2019). Furthermore, it is believed that there are remnants of megalithic stones or the continuation of megalithic cultural traditions in Pahang, Johor, Terengganu, and Kedah. Apart from those states, especially in Kuala Lumpur, Kelantan, and Perlis, there are no record of the discovery has yet been found. However, more evidence is needed to prove this. These findings show that the respondents who claimed they know about the existence of megalithic stones in Malaysia have provided a variety of answers. In this light, most respondents chose Negeri Sembilan, Melaka, Perak, Sabah, and Sarawak, in line with the real location of the megalithic sites found by archaeologists. However, some respondents mentioned states with no recorded megalithic stones sites. This finding reflect that the respondent's actual understanding of megaliths needs to be refined and there is a need to further study the possible location of megalith sites in each state.

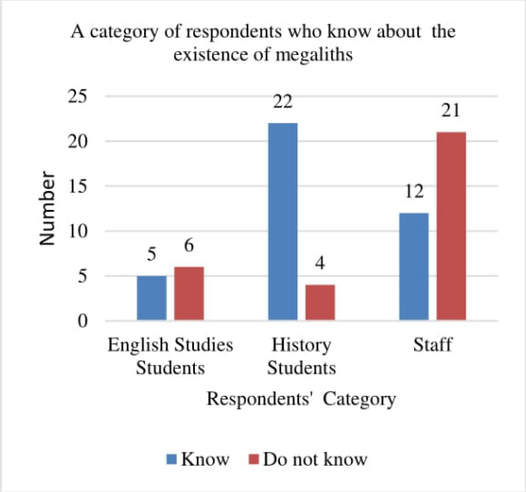


FIGURE 6. A category of respondents who know about the existence of megaliths

Figure 6 shows the frequency of respondents who know about the existence of megaliths based on their category. 22 (85%) out of 26 history students know or have obtained information about megalithic stones and only four respondents (15%) claimed that they do not know about megalithic stones. Furthermore, five or 45% of the English Studies students who were undergoing industrial training at the Institute of the Malay World and Civilization know about the existence of megaliths in Malaysia. In comparison, six respondents (55%) do not know about the existence of megaliths in Malaysia. In the meantime, out of the 33 staff members surveyed, 21 respondents (64%) do not know the existence of megaliths in Malaysia; only 12 or 36% of the respondents know about megaliths in Malaysia. These findings are in line with Ramli (2020), who stated that those outsides of the Minangkabau community and are not directly involved with the study of history, archaeology and culture have limited or no knowledge of megalithic stones. This statement is also supported by Saludin (2020) who claimed that only some members of the local communities and researchers of megalithic stones are aware of their existence.

SOURCE OF INFORMATION

The next section identifies the source of information obtained by the respondents who know about megalithic in Malaysia. In this section, the respondents were provided with more than 1 option of information source. As shown in Figure 7, the survey found that for respondents who know about the existence of megalith stones that is 39 respondents, 28 or 72% of the respondents obtain most of the information from electronic media such as online news portals, online journals, blogs, and social media. This is followed by printed media such as books, papers, pamphlets, and others with 25 or 64% of respondents. Meanwhile, 20 or 51% of the respondents mentioned that they obtained information from oral storytelling either by the elders in their community or through researchers' presentations during academic sharing sessions like workshops, seminars, and conferences. As shown, most respondents obtain information on megaliths through digital media as it allows information to be easily obtained and accessed. Nevertheless, the authenticity of sources and information is important, and the digital presentation of past study findings needs to be shared to the public.

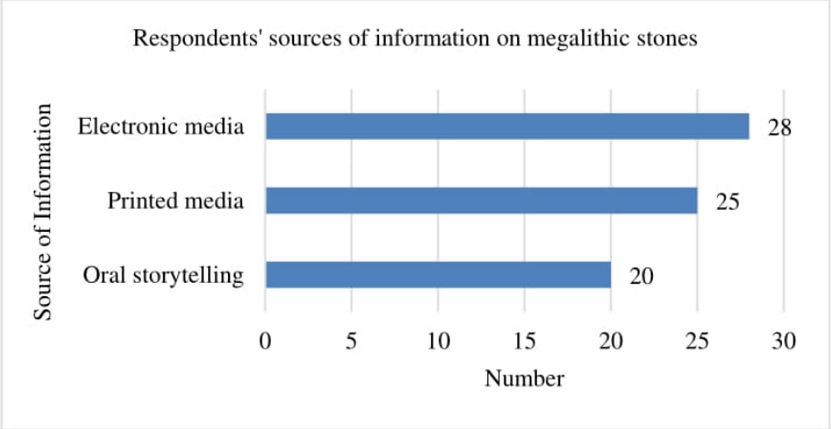


FIGURE 7. Respondents' sources of information on megalithic stones

DIGITAL ACCESS OF MEGALITHIC INFORMATION

Our society today is highly reliant on the use of digital and information and communication technology (ICT) approaches in our everyday lives. This is in line with the findings shown in Figure 8 when 100% of respondents agreed that the dissemination of information today is more effectively done through digital approaches. Ramli (2020), asserted that the importance of digitizing information on megalithic sites is the information can be accessed only by Malaysians but also by people around the world. Moreover, Saludin (2020) stated that it is necessary to make digital scientific resources available for public access to equip them with the necessary information. Arbi (2020) also stated that using digital applications and technologies related to megalithic is important in providing accurate and easily accessible information in this digital era. Therefore, the development of megalithic culture information visualization should be realized according to current needs.

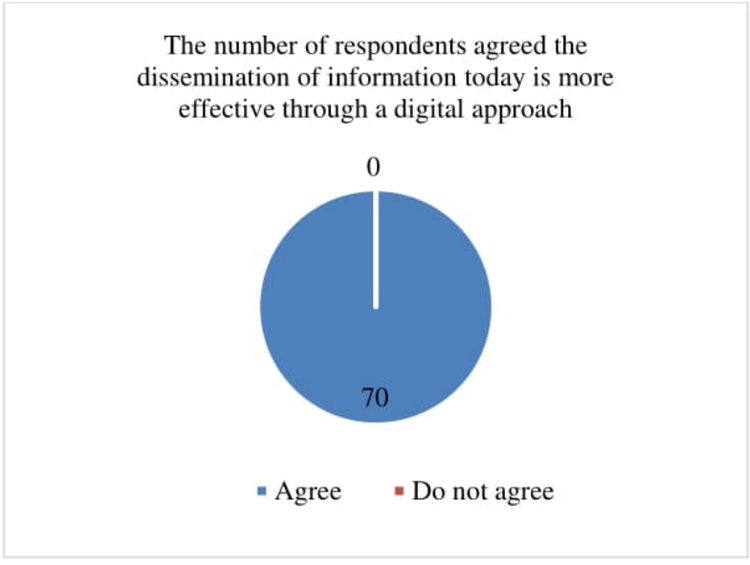
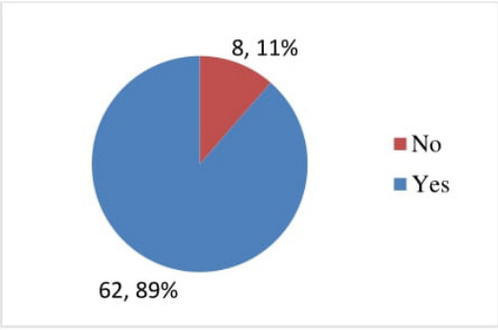


FIGURE 8. Respondents' agreement that the dissemination of information today is more effective through digital approaches

THE RESPONDENTS' INTEREST TO OBTAIN MORE INFORMATION ABOUT MEGALITHIC STONES

This study also identified the respondents' interest to obtain more information about megalithic stones in Malaysia that respondents. The findings show that almost all respondents are interested to obtain more information about megaliths found in Malaysia, as illustrated in Figure 9.

a. The number of respondents interested to obtain more information about megaliths found in Malaysia



b. Category of respondents who are interested to obtain more information about megaliths found in Malaysia

Classification	No	Yes	Total
English Studies Students	4	7	11
History Studies Students	0	26	26
Staff Members	4	29	33
Total	8	62	70

FIGURE 9. (a) The number of respondents interested to obtain more information about megaliths found in Malaysia; (b) The number of interested respondents to obtain more information about megaliths found in Malaysia according to the respondents' category.

As shown in Figure 9 (a), 62 or 89% of respondents are interested in obtaining more information related to megaliths in Malaysia while only eight or 11% were not interested. Figure 10 (b) showed that respondents who were not interested in knowing megalithic information in Malaysia comprise four English Studies students and four staff members. On contrary, all history students were interested to obtain more information about megalithic stones in Malaysia in line with their field of study. This finding indirectly justifies the statement of Saludin (2020), who stated that those directly involved with the study of history, archaeology, and culture would have more knowledge and understanding of megalithic culture. This finding indicates that the demand for megalithic information is high, especially in today's digital world as all respondents agreed on the effectiveness of information sharing through digital approaches as shown in Figure 8.

THE FORM OF INFORMATION PREFERRED BY THE RESPONDENTS

The study also obtained input on the form of information preferred by the respondents. There were a total of seven options given, and the respondents were allowed to select more than one form of information. As shown in Figure 10, 91% of the respondents chose pictures followed by videos by 77%. This figure indicates that users prefer visual elements such as pictures and videos. Agree with Midway (2020), the combination of images such as graphics and charts with reading text can make users faster capture the message they want to convey. Besides that, 360º virtual tour is the third-highest preferred form of information with 59%, followed by a text with 56%, map location with 49%, papers or pamphlets with 33%, and forums or discussions with 27%. These findings were useful in designing and developing a digital application for decimating

information about megalithic culture. Digital applications that can be accessed online are one of the mechanisms of information sharing whether in the form of pictures, videos, audio or text for all levels of users easily and rapidly (Glover 2016). Therefore, these findings provide useful inputs that guide the design of information visualization applications in the domain of megalithic cultural studies.

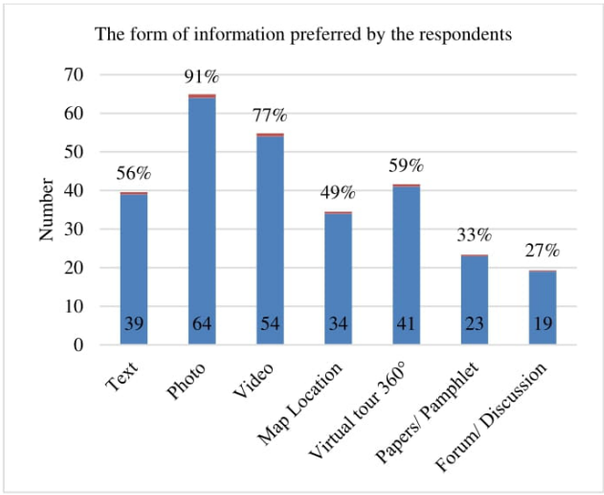


FIGURE 10. The form of information preferred by the respondents

CONCLUSION

The megalith is one of the local cultural relics in Negeri Sembilan that is increasingly forgotten. This study was conducted to identify respondents' awareness of megalithic culture and ascertain the needs and demands for developing a digital application to disseminate information about the megalithic culture in Negeri Sembilan. The study's findings indicated that 56% of the respondents know about the existence of megalithic culture in Malaysia, which was at a moderate level. Apart from that, there is a high demand for developing a digital information application, and 100% of respondents agreed the dissemination of information today is more effective through a digital approach. Most respondents are also interested in knowing== more about the megalithic culture in Negeri Sembilan. These findings indicate that there was a high demand and need for the provision of digital information megalithic information in Malaysia, especially in Negeri Sembilan. Therefore, the development of a digital application for information on megalithic culture should be intensified to facilitate access and sharing of information about it. The findings from the questionnaire provide clues related to the form of information preferred by respondents that can be used as part of input in developing a web-based visualization of megalithic cultural information in Negeri Sembilan according to consumers' needs and the demand of today's digital technology. However, this preliminary study only focused on a small number of respondents at one university. Therefore, it is recommended that further studies be conducted with a broader scope to obtain more convincing and comprehensive results. The visualisation of information that focuses on megalithic culture can be used as one of the widely accessible sources of knowledge for general reference to preserving cultural information that is always visible in the future.

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