

Developing an Android App as a Maritime History Learning Media in Senior High School

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ABSTRACT

History learning is an efforts for maintaining maritime culture as part of the nation's identity. However, the maritime paradigm is still not an important issue for most Indonesians. Therefore, the learning of maritime history needs to be improved in order to strengthen national integration. One of the obstacles to learning maritime history is the lack of learning media about maritime history. This study aims to develop a maritime history learning media of the Sultanate of Banten based on an android application. The research method used is research and development (RND) with a 4-D development model (Define, Design, Develop and Disseminate). The development of this media was carried out on the basis of the needs of history teachers and class X students in Banten for the learning media of maritime history of the Sultanate of Banten. The results of this study produced a learning media that has been created starting from the framework, its design, and the content of the material which is packaged into an Android Application product. The learning media for the Maritime History of the Sultanate of Banten based on the Android Application that was developed received a positive response from learning experts, linguists, media experts, teachers and students. The media trials for teachers and students show that the learning media developed is in accordance with the needs of students and teachers, providing student motivation in learning and making learning more enjoyable.

Keywords: Android App, Maritime History, Learning Media.

INTRODUCTION

Along with the development of digital transformation in the world of education, learning media continues to develop. One of the learning media that can contain various forms of media in one hand is android application. Tahel and Ginting (2019: 114) revealed that Android applications used in learning media make learning more interesting than conventional information. An android application can contain information in various form such as text, videos, games, and quizzes. In addition, android application as learning media can also be downloaded on the Play Store that easily accessible to teachers and students.

Developing an android app as a history learning media is a creative effort by teachers in creating effective and fun learning (Supriatna & Maulidah, 2020). The development of android application as a history learning media has been carried out by Byunghoon (2019), Mehler (2017), Fanani, et al (2021), Sulisty, et al (2020), Jannah, et al (2021), Firmansyah & Bibi (2020). Meanwhile, specifically developing an android app as a maritime history learning media were carried out by Smith, et al (2018) entitled *Pasport Melbourne App* and Faria (2018) about the *App of The Portuguese Maritime Voyages*. Meanwhile, the development of Maritime History learning media in Indonesia has not been carried out.

Indonesia is a maritime country with the largest archipelago in the world. The Indonesian archipelago has become an important part of international maritime shipping and trade networks. Indonesia's maritime history is an important study because the civilization, economy and character of the Indonesian nation are closely related to its seas. This is evidenced by the important role of the sea in the historical journey of the Indonesian nation, especially during the Hindu-Buddhist and Islamic kingdom that influenced the life of the nation until now (Nur & Nurbayani, 2020: 137).

The Sultanate of Banten was one of the largest maritime kingdom in the archipelago in the 16th-17th centuries. Banten was the center of international trade in the XVI century. Karangantu Port is the gateway to the arrival of various nations in the world. Maritime trade in Banten Port experienced a peak of glory during the time of Sultan Ageng Tirtayasa. The maritime trade system used by Sultan Ageng was free trade as used by other countries such as Britain, Denmark, Mecca, Karamandel, Bengal, Siam, Tonkin and China (Kosoh, 1979:88).

Despite Indonesia's potential and glory in the maritime sector, the current maritime paradigm is not an important issue in the current view of the Indonesian nation (Wasino, 2015: 35). This is where the role of maritime history learning is important. Learning maritime history is one of the efforts in maintaining maritime culture as part of the nation's identity (Nur & Nurbayani, 2020: 137). Maritime history learning has actually been carried out by history teachers in Indonesia. Wasino (2015:41) mentioned that the 2013 curriculum has accommodated maritime content in history learning. But its implementation is not without problems. One of the obstacles is the lack of learning media about maritime history.

The development of an android application entitled *Banten Harbour* as a learning medium for the Maritime History of the Sultanate of Banten can provide a strong picture of the maritime culture and values owned by the Indonesian nation as a maritime country (Ufie, et al, 2020: 591), as well as being an integrated effort to introduce maritime history broadly among students.

METHOD

In this study, the method used was Research and Development. The development model used in this study was the 4D model of S.Thiagarajan, Dorothy S. Semmel, and Melvyn I. Semmel (1974). In this development model, there were four stages, namely Define, Design, Develop and Disseminate. This method aim to create a product, namely a learning media for the Maritime History of the Sultanate of Banten based on the Android Application. The learning media will be used to improve the learning process, especially in the subject of Indonesian History in senior high school in 10th Grade.

RESULTS AND DISCUSSION

Overview of The Needs Of Maritime History Learning Media

The development of the app was carried out on the basis of the needs of history teachers in Banten for the learning media of the Maritime History of the Sultanate of Banten. This is shown by the results of the questionnaire on the needs of maritime history learning media of the Sultanate of Banten which was filled by 37 history teachers in Banten, the results of the questionnaire of students' needs for learning media and the results of interviews with history teachers at SMAN 1 Ciruas.

Learning media called also as Teaching aids means any kinds of materials that are usually used in an educational context such as books, pictures, or maps, including any other devices such as DVD or computer or mobile phone used by teachers as classroom interactions (Shukla, 2018) (Yulifar & Agustina, 2020). Learning media has become an integral part of learning itself. This is in line with Putra (2013, p. 20) who states that learning media is an important component in learning in addition to learning objectives, materials, educators or teachers, students or students, and learning methods. In addition to its very important presence as a conveyer of information, learning media also has various other benefits felt by teachers and students. Ainina (2014, p. 41) also said that students will more easily digest learning material with the help of media. Since the Complexity of the material to be conveyed to the protégé can be simplified with the help of the substrate.

The results of an interview with a history teacher at SMAN 1 Ciruas that today's learning is required to be more varied in presenting learning models and media to students. One-way learning media is considered no longer attractive in the view of learners. So that more interactive and varied learning media is needed so that learning feels more fun and not boring. Advances in science and technology, especially information technology, greatly influence the selection of media used in history learning. Various innovations by utilizing information and communication technology for history learning show a positive trend in the use of information or digital technology-based learning media (Utami, 2020, p.52).

In addition, the impact of COVID-19 has also resulted in many educational institutions switching to online learning using various digital platforms. This is also

shown by the results of the questionnaire on teacher needs for learning media that 45.9% of history teachers "Strongly Agree" and 45.9% "Agree" that digital learning media is more attractive than non-digital learning media. Meanwhile, another 8.1% answered "Disagree" which means that a small percentage of history teachers consider non-digital learning media more interesting than digital. Some of the reasons are revealed by (Nasution, 2020, p.6) that the rapid use of digital learning media is not necessarily without problems. Various obstacles were felt by teachers in the use of digital learning media, including the problem of the availability of devices in the form of laptops or smartphones that were not owned by all students. In addition, not all teachers and students can use the application directly and blend in with the digitization.

There are various types of historical learning media that have emerged along with the development of digital technology. Many emerging sites or trends learn to use technology with the help of certain applications and networks. For example, ruang guru application (Ramadhani, & Setiawati, 2017) and Zenius.Net (Sintawana, et al, 2020). Such applications are considered practical and easy because students can study anytime and anywhere. In addition, this application also has complete materials based on audio-visual and practice questions (Ramadhani, & Setiawati, 2017, p. 242). The results of an interview with a teacher at SMAN 1 Ciruas also revealed that android application-based learning media can be a variation needed today. Because current learning must be student-centered, must be in accordance with the student's learning style, according to student wishes, then this application media can be an alternative that is the needs of teachers and students today.

Android applications can be the right answer for the creation of interesting and fun learning for students. The results of Muhasin's research (2015) that Android application media has been proven to be able to increase students' interest in learning in history subjects. This is considering that the tendency of students towards gadgets is quite large, the results of the questionnaire show that 99.5% of students of SMAN 1 Ciruas have gadgets. They have been familiar with gadget technology for a long time, the results of the questionnaire show that 58.5% of students have been using gadgets for 2-5 years, 19.4% for 6-10 years, 13.4% for more than 10 years and 8.8% for 0-1 years. In addition, 85.7% of students use android smartphones regularly. The duration of gadget use for a day is quite massive, including 49.5% for 7-12 hours / day, 36.9% for 1-6 hours / day, and 13.6% for 13-24 hours / day.

But unfortunately, the phenomenon of the rapid use of gadgets in students is still not optimized for learning purposes. This is shown in the results of the questionnaire filled out by students that only 25.8% of students use gadgets to study. While most others use gadgets for other purposes such as for Social Media (33.9%), and another 29% answer online shopping, watching movies, reading comics, and sports interests. The importance of using gadgets in learning was also

conveyed by Mahfud & Wulansari (2018) that Gadgets are also considered as "friends" at this time for the community, especially students in the school environment, therefore gadgets need to be involved in learning.

Android application-based learning media can be an innovation to maximize the use of gadgets in learning. However, such applications are still very minimally used by history teachers as a medium for learning history. This was also revealed by the teacher of SMAN 1 Ciruas in his interview that Android Application-based Learning media is still rarely used because of its limited existence. The results of the questionnaire on teacher needs for history learning media showed that history teachers 5.4% "Strongly Agree" and 13.5% "Agree" had used android application-based learning media. While 62.2% "Disagree" and 18.9% "Strongly Disagree", it means that most history teachers still have never used android application-based learning media.

This phenomenon is actually not without reason. One of the factors that causes teachers to still produce their own learning media and then share them with the media mentioned above is because there is no android application that can meet these needs. that is, there is no android application that can contain a variety of systematic history learning materials and practice questions that can be used by teachers and students. This is evidenced by the positive response shown by history teachers if there is an android application-based history learning media that can be accessed anywhere and anytime (56.8% Strongly Agree and 43.2% Agree), and android application-based learning media contains various materials and systematic evaluations (56.8% Strongly Agree, 40.5% Agree and 2.7% Disagree). Even so, a small percentage of teachers (2.7% of teachers) disagree with the plan due to the limited use of teachers in using media. Kurniawan (2020, p. 77) said that there is a gap between the competencies and skills possessed by history teachers in general and with the pace of development and utilization of technology, so that some teachers, especially those who have turned 45 years old and above, have difficulty adapting. So that easy-to-use learning media (user-friendly) is needed and a technical instruction tutorial is needed for teachers and students to be able to operate the media properly.

The presence of android application-based learning media will make it easier for teachers and students in the learning process. The questionnaire showed that history learning would be more engaging (56.4% Strongly Agreed and 43.6% Agreed), could make it easier for teachers to teach history (46.2% Strongly Agreed and 53.8% Agreed), could increase student independence (46.2% Strongly Agreed, 48.7% Agreed and 5.1% Disagreed), and could make students more enthusiastic about learning (48.7% Strongly Agree, 48.7% Agree and 2.6% Disagree). The results of this study are in accordance with the research of Putra, et al (2009), that learning media based on android applications can increase student learning motivation and make learning more active and interesting so as to foster students' willingness to

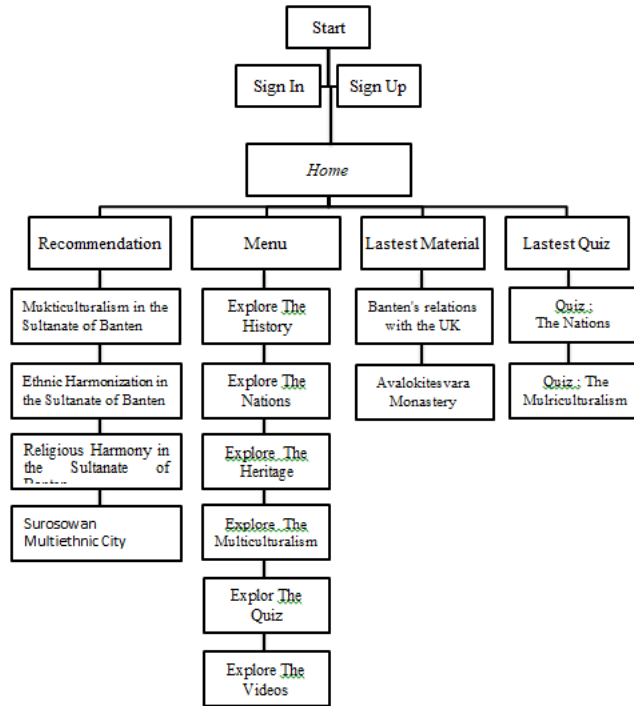
learn. Also the results of research conducted by Valk, et al, (2010) that the use of android application-based learning media fosters student interest, creates a sense of joy and can even provide new passion for students during the implementation of learning activities.

Maritime history is a study of the role of the sea in building world civilization (William, 2020: 371). Starkey (2020:377) mentions that maritime history is referred to as a cross-disciplinary that contains various fields of discussion ranging from economic, socio-cultural, political to the history of technology. One of the factors for the lack of learning about maritime history of the Sultanate of Banten in schools is the limited learning media. In the banten province itself there is not a comprehensive learning media about the maritime history of the Sultanate of Banten. This is as the result of an interview with a history teacher at SMAN 1 Ciruas that there is no comprehensive learning media about the History of the Banten Sultanate, let alone the Maritime History of the Banten Sultanate. A similar answer was also shown in the questionnaire of students' needs for learning media that 88% of students agreed that android application-based learning media was held in the learning process of maritime history material of the Sultanate of Banten. The same thing was also shown in the results of the questionnaire that 53.8% of history teachers "Strongly Agree" and another 43.6% "Agree" that history teachers need android application-based learning media about the Maritime History of the Sultanate of Banten.

Designing Android Application As Maritime History Learning Media Of The Sultanate Of Banten

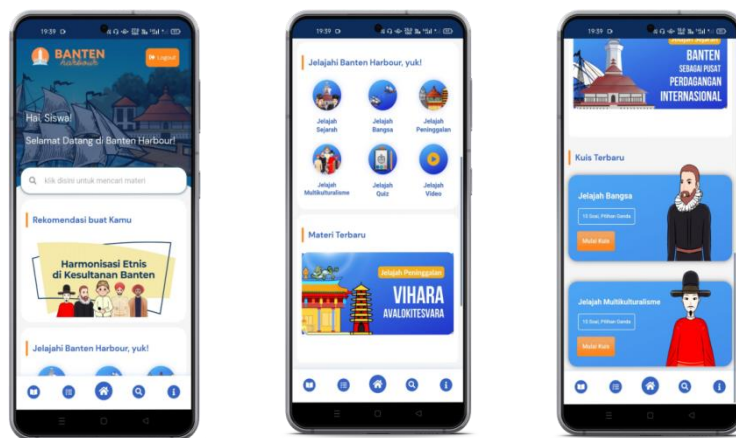
The design of learning media products is carried out starting from the framework, content, colors, layout, illustrations, images, all parts of the application, icons and designing material on the Maritime History of the Sultanate of Banten. Designing the appearance or layout of learning media as well as setting the user interface (UI) and user experience (UX) so that this history learning media can provide an interesting experience for students and can be used easily by its users (user friendly). The storyboard design in the Banten Harbour application can be seen in the image below:

Figure 4.1.
Banten Harbour App Storyboard



At this stage, a design that has been made is generated starting from the framework, its design, and the material content which is packaged into an Android Application product. The design of the android application for the Maritime History learning media of the Sultanate of Banten entitled Banten Harbour is as follows:

Figure 4. 2. Banten Harbour App



Developing Android App as a Maritime History Learning Media

The app has been tested by three experts, namely material experts, media experts and linguists. The tests done to ensure the feasibility of this learning media. The recapitulation of the expert's assessment (Expert Appraisal) on the app is as follows.

Table 4.1. Recapitulation of Expert Assessments

No.	Expert	Name	Presentase	Interpretasi
1.	Material expert	Dr. Moh. Ali Fadillah, DEA	91,25 %	Very Good
2.	Media expert	Prof. Dr. Deni Darmawan, S.Pd., M.Si., MCE	96,4%	Very Good
3.	Linguist	Dr. Yunus Abidin, M.Pd	100%	Very Good
Average			95,89%	Very Good

Based on the table above, it can be seen that of the three experts who have tested the feasibility of the app, they get an average assessment of 95.89%, which means that the media developed is "Very Good/Very Feasible" to use. After the feasibility test was carried out, the learning media developed entered the trial limited to two history teachers and one trial class. The assessment of history teachers, namely AS and B teachers, Android-based Banten Sultanate Maritime History learning media received the same score of 91.7% by both US teachers and teacher B. This shows that the Android-based Banten Sultanate Maritime History learning media developed is included in the Very Good / Very Decent category. This is in line with the student's assessment, the Android-based Maritime History learning media of the Sultanate of Banten received an assessment of 87.5% of class X ips 3 and 87.9% of class X MIPA 6 and the total assessment of the overall assessment from students was 87.7%. This shows that the Android-based Maritime History learning media of the Banten Sultanate that was developed is included in the Very Good / Very Decent category.

Dissemination of The App of Maritime History Learning Media

The dissemination stage is an activity to disseminate research products so that they can be widely used by users. The dissemination activity of the products resulting from this study, namely the Android Application of the Maritime History of the Sultanate of Banten entitled "Banten Harbour" was held on Tuesday, June 7, 2022 at 11.00 WIB – 13.00 WIB located in the Hall of Building B of the Banten Provincial Social Service Sheikh Nawawi Road, KP3B, Curug, Serang City. This dissemination activity was attended by 40 history teachers who were affiliated as Members of the

Indonesian History Teachers Association (AGSI) of Banten Province and Members of the Banten Provincial History Subject Teachers Association (MGMP).

Figure 4.3. Research Product Dissemination Activities



CONCLUSION

The Maritime History learning media of the Banten Sultanate based on the Android Application is a learning media developed to meet the history learning needs of both teachers and students. This product contains material about the Maritime History of the Sultanate of Banten which is presented audio-visually through interesting animated learning videos, besides that there is also an evaluation in the form of quiz-shaped question exercises.

The learning media for the Maritime History of the Sultanate of Banten based on the Android Application that was developed received a positive response from learning experts, linguists, media experts, teachers and students. This can be seen from the results of due diligence to experts who show that the media developed is "very feasible" to use in learning. The media trials for teachers and students show that the learning media developed is in accordance with the needs of students and teachers, providing student motivation in learning and making learning more enjoyable. Through the dissemination of research products, history teachers throughout Banten province gave a positive response and welcomed the media developed. It is hoped that the media developed can be widely used by teachers and students throughout Banten province.

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