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Digitalisation of Qr Code-Based Historical Museology Laboratory (E-Museum) as an Innovative History Resource

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ABSTRACT

Technology transformation from Revolution 4.0 to Society 5.0, where technology is increasingly integrated with human life. Education is the key in developing innovative human resources. In the era of Society 5.0, with the rapid development of technology, it is necessary to transform from manual to digital learning resources. Based on the importance of this, the purpose of this research is to digitize historical sources in a Qr Code-based museology laboratory and test their effectiveness. The use of learning resources, especially in the form of a museology laboratory with a Qr Code, is an innovative way to enhance history learning. In this study, the method used was the Research and Development (R&D) ADDIE model. This model has 5 stages consisting of analyzing, designing, developing, implementing and evaluating. The focus of the research object was conducted at the Department of History, Faculty of Social Sciences, State University of Malang, East Java Province. The trial results show that it is very effective in 86% points to improve the quality of history learning. Through the results of technology and education collaboration in the Society 5.0 era, practical implementation emerged in the form of a Qr Code-based E-Museum.

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1. INTRODUCTION

The development of information and communication technology has brought about various revolutions in the 21st century. At first, humans entered the era of Revolution 4.0, where artificial intelligence was created with the concept of automation being the main focus in human life (Rahmawati, 2022) However, recently, a more advanced concept has emerged, namely the Society 5.0 era, which is a continued mission and challenge from the previous era. In this era, technology is increasingly integrated with human life creating a more connected and intelligent society (Mu'minah, 2021)

The Society 5.0 era places human resources at the centre of technological innovation and transformation (Zulfa & Najicha, 2022). The main focus of this era is to empower people to play an active role in dealing with technological developments and utilise them intelligently to improve the quality of life in various aspects. In contrast to the previous era where technology dominated aspects of people's lives until it was suspected of degrading the existence of society (Rahma, 2020). Whereas in Society 5.0, technology is directed to support and enhance human potential, thus creating a more humane environment and having a positive impact on daily life (Rahmatsyah & Wibawa, 2022). For this reason, human resources are needed that have high thinking power, are innovative, and adaptive. This can be obtained through the 5C skills consisting of critical thinking, communication, collaboration, creativity, and character through educational aspects (Priyantoko & Hasanudin, 2022).

Community involvement in technology in the Society 5.0 era raises its own challenges. The culture of the previous era left the challenge of the role of society wisely in the use of technology (Ayu et al., 2022). So, people in this era need to consciously and periodically continue to adjust in various aspects of life, one of which is the field of education. Education has a central role as the foundation and key that supports the progress of a nation (Irianto, 2017). With a strong and effective education system, society can produce creative, innovative, and technologically proficient human resources.

The goal of national education refers to Law No.20 of 2003 which is not as easy to achieve as planned on paper, but it is also not impossible to realise. To achieve it, effective implementation of learning is required. The effectiveness of the learning process can be determined through one of the learning components, namely learning materials or resources (Abdullah, 2012).

Learning resources are all things that can be utilized by students for learning activities and improve the quality of learning (Samsinar, 2020). The goal is to increase effectiveness, efficiency, and fun in the learning process (Anis & Mardiani, 2022). Learning resources contain information that is conveyed which is usually in the form of ideas, meanings, and facts related to learning material. The use of learning resources will help present information more flexibly and concretely, increasing the interest of students. The classification of learning resources includes messages, people, materials, tools, techniques, and the surrounding environment that support learning activities (Rosiyanti & Muthmainnah, 2018).

Effective learning can be achieved through the utilisation of learning resources from around the environment. One of them is the existence of a laboratory as a learning facility that has many important and informative sources related to science (Evawani, 2022). The laboratory itself can be formed according to scientific needs, one of which is history. In the learning environment of the Department of History, State University of Malang, it has a type of museology laboratory that stores various collections of artefacts based on historical periodisation in Indonesia. This laboratory has two distributions of learning resources, namely (indoor) indoors including statues, fossils, inscriptions, and mock-ups, while (outdoor) outdoors in the form of reliefs, temple replicas and inscriptions.

Based on the conditions, potentials, and challenges above, we can assume that education is a fundamental part in creating human resources who are technologically literate and competitive in the era of Society 5.0. Efforts that can be made through the field of education are laboratory digital learning resources. For this reason, it can be implemented through a digital history museology laboratory. Digitalisation of museology laboratory collections in the form of digital catalogues with qr code technology is an effort to package interesting learning resources. A catalogue is an organisation or list that includes items or objects available at a particular location (Piliang, 2013). Qr Code or Quick Response Code is a set of data collected in an image in the form of a two-dimensional (2D) code (Sukabumi, 2016). History learning resources in the form of qr code will display a practical and innovative impression in digital-based history learning.

Therefore, this article was prepared by the author to discuss the digitalisation of the qr code-based museology laboratory for innovative learning resources. The development of digitisation is adapted to the current conditions as an effort to make optimal use of technology. The urgency of digitisation and the qr code development process are the focus of the research that will be discussed by the researcher.

2. METHOD

Through the research, researchers applied the Research and Development (R&D) method. The purpose of this method contains several coherent and procedural steps. The purpose of the research method used to produce product results that are credible, valid, and can be accounted for (Sugiyono, 2013). In addition, this method also uses the ADDIE research and development model. The products in this development research will be prepared in stages according to the ADDIE model development steps. There are five main stages in this model including Analyze, Design, Develop, Implement, and Evaluate (Tegeh et al., 2014). The following is a diagram of the ADDIE model listed in the figure below

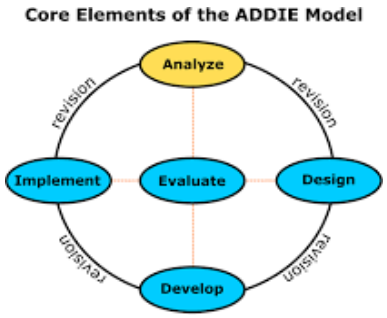

Figure 1. Stages of the ADDIE Development Model

In the research, the basic stage is to analyse the potential, problems, supporting resources and needs related to the history department's museology laboratory. To analyse it, observation and literature study were conducted as additional materials that strengthen as references. Sources for literature studies are obtained from books, literature, reports, articles, and others that are credible to produce valid data (Adlini et al., 2022). After obtaining the data, it is then processed to obtain analysis results that can be written descriptively.

The next step was to develop the design of the QR Code-based digital catalogue of the history department's museology laboratory collection. The foundation of the design was based on the results of the analysis stage. Next, move on to the development stage where the research team describes the collections in the field and elaborates the data on each collection. Until the stage of implementing the product and testing the product. Finally, in the last stage, evaluating the product until perfection.

The data obtained through this research is in the form of quantitative and qualitative data. Quantitative data is obtained from the process of analysing the evaluation of the products made. The form of this data is in the form of numerical numbers that are carefully processed. Another thing with qualitative data obtained from the results of a questionnaire that has been filled out by students of the Department of History, State University of Malang regarding the Qr Code of the museological laboratory collection. The type of instrument used in obtaining research data is a questionnaire instrument with a 4-point *Likert* scale determination. With the use of this scale, data analysis techniques are needed to analyse data that can be measured and interpreted. If described through the formula it will be as below

$$P = \frac{\sum x}{n} => \frac{Jumlah\ skor}{total\ skor} \times 100\%$$

Source: Arikunto, 2013

Description
P : Average score
∑x : score obtained
n : maximum total

Furthermore, the following are the benchmarks for assessing the feasibility of the results obtained through the formula that has been used as follows.

No.	Persentase	Kriteria
1.	76% ≤ skor ≤ 100%	Very Decen
2.	51% ≤ skor ≤ 75%	Feasible
3.	26% ≤ skor ≤ 50%	Decent Enough
4.	0% ≤ skor ≤ 25%	Less Feasible

Source: (Arikunto, 2013)

In addition to the above, there is a research objective conducted at the Department of History, Faculty of Social Sciences, State University of Malang, East Java Province. This department has a museology

laboratory that collects various artefacts from across the ages in Indonesia. The product of this research is a QR Code of the museology laboratory collection as a form of digitisation of history education

3. RESULTS AND DISCUSSION (10 PT)

3.1. 1. Urgency of Digitalisation of Museology Laboratory Collection (E-Museum) Based on QR Code

Laboratory is a place used to conduct research activities, experiments, and scientific training that are carried out in a controlled manner (Syaifulloh & Basuki Wibowo, 2014). The laboratory itself is designed to be a place to carry out learning activities directly so that real experiences can be felt. In addition, the laboratory has the potential as a place that can present the form of theory during learning that is impossible to observe directly in the form of mock- ups, maps, and others.

The existence of the laboratory as one part of the learning environment has been formulated by the government through Permendiknas No.24 of 2007 related to facilities and infrastructure. The laboratory was built as a facility that supports learning practice activities (Laeli & Maryani, 2020). To support the function of the laboratory, a well-integrated and effective management system is needed. A good management system will create a conducive and innovative learning environment. With conducive and innovative conditions, it will make students feel comfortable in understanding abstract material through direct learning. The types of laboratories do not only exist in the natural sciences, but social sciences also exist such as history laboratories.

The history laboratory is one of the places that becomes a replica model and stores related to historical matters so that it can function for history learning activities (Nuryanti, 2016). Through historical things in the laboratory such as artefacts, mock-ups, maps, and so on can be used as a source of historical learning that reflects, reconstructs events in the past for the present and future. The components of the history laboratory are certainly different from laboratories from natural science fields that carry out experimental practices, in which there are more books, scientific papers in the form of reports, theses, dissertations, theses, archives, replicas, mock-ups or miniatures, even artefacts that are important for students to facilitate direct understanding related to course material.

Learning resources are something that can make it easier for learners to receive information both knowledge and skills in learning activities (Khanifah et al., 2012). Learning resources can extend to include media, teaching aids, and games that can provide a series of information and skills to accompany children's learning activities (Yunanto, 2004). The importance of learning resources in the learning process is the ease with which students can access them. Therefore, the purpose of using learning resources is to enrich knowledge, foster interest and motivation in learning (Anis & Mardiani, 2022). In addition, the existence of learning resources can be used by teachers to improve learning interactions and the achievement of learning objectives. The utilisation of learning resources in learning needs to pay attention to aspects of fun, current, easy to use and access, can present the information needed by students and provide experience (Supriadi, 2017). So, the existence of a laboratory as a learning resource can fulfil the necessary aspects.

The rapid development of technology has an impact on education around the world. The learning process in the 5.0 era is required to go hand in hand with technology or utilise technology comprehensively. The role of technology for education will facilitate access to the use of technology and information that leads to the achievement of learning objectives (Anis & Mardiani, 2022). Era 5.0 in education will show the digitalisation of the educational process starting from approaches, sources, media, teaching materials, methods, and others that show the flexibility of learning activities.

A catalogue is an organisation or list that includes goods or objects that are available in a particular location. Catalogues have a systematic nature in organisation that makes it easier for readers to read and find what they need (Afi et al., 2021). The usefulness of the catalogue itself is for a quick way to identify an object, displaying the information contained in an object (Rizali, 2018). Catalogues themselves have various forms, one of which is electronic or digital catalogues. This type of catalogue has efficient, practical, and flexible properties that can be accessed anywhere and anytime (Noorbella & Widihastuti, 2018). In addition, digital catalogues have other benefits such as saving costs for users and readers. This form of catalogue can be used as a source of learning history in digital form.

The history learning process also applies to the application of technology or digitalisation. Historical learning resources that can be used as materials for learning activities have an open space to merge in the digitisation process. History learning resources that are generally outdated, conventional can be packaged practically and effectively using technological power. Digitisation of historical learning resources still pays attention to the validity and validity of the source so that the value contained in it does not change. This

collaboration between digitisation and historical learning resources in learning activities will produce capable and modernist learners (Maksum & Fitria, 2021).

3.2. Digitalization Process of Museology Laboratory Collection (E-Museum) Based on Qr Code

a. Analyze

E-Museum development efforts are carried out based on the results of analyses arising from preliminary studies and literature reviews. Through the results of the preliminary study, it provides insights related to the potential, constraints, and existing needs. This approach is strengthened by referring to various reference sources in the literature review which serves as the main guide [29]. Information and data collected from various sources were then carefully analysed and assessed to obtain more in-depth results. The results of the analysis related to the needs and potential related to the historical museology laboratory show 95% of the condition and completeness of the historical museology laboratory collection. Furthermore, the technology in the laboratory is 90% due to the limited number of computers in the museology laboratory. Finally, the analysis related to the need for innovative learning resources is 96% where this needs to be balanced with the process of digitising the laboratory collection.

b. Design

The next stage is in designing the E-Museum product to be developed. In this stage, the preparation of a digital catalogue model on the Google Sites page and the design of the QR Code that will be displayed in the museology laboratory based on the analysis of potential, needs and problems. The following is the design of the E-Museum in the figure below.of a digital catalogue model on the Google Sites page and the design of the QR Code that will be displayed in the museology laboratory based on the analysis of potential, needs and problems. The following is the design of the E-Museum in the picture below.

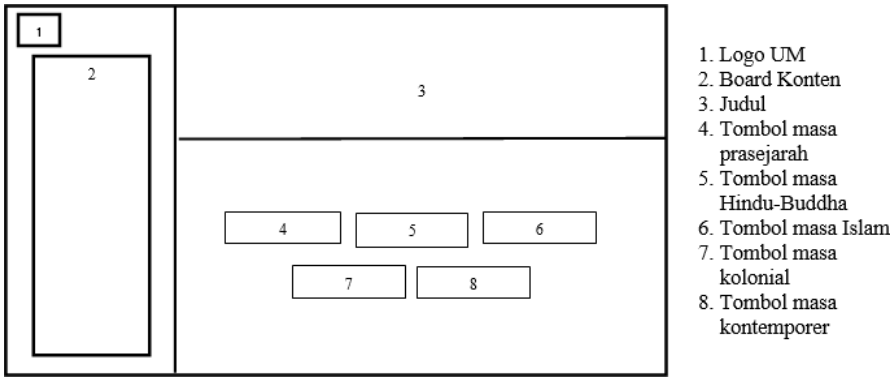

Figure 2. Design of the Initial Display of the E-Museum Digital Catalog on Google Sites

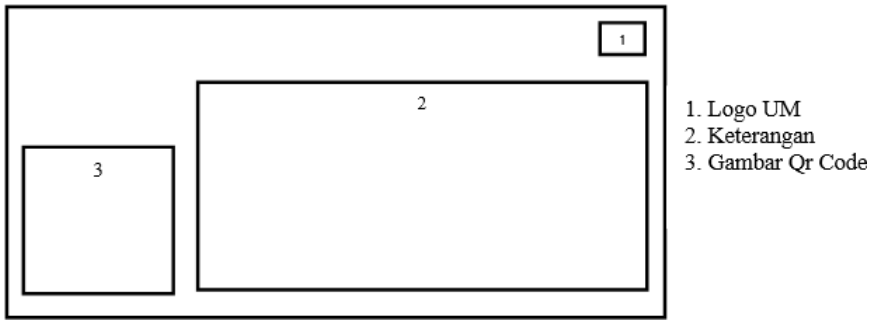

Figure 3. Digital Catalog Display Design of E-Museum Collection

c. Develop

With the design form that has been prepared, it will be developed into a digital catalogue product that uses Google Sites and is visualised in the form of a QR Code. The developed catalogue is divided based on the periodisation of Indonesian history, starting from the prehistoric period, Hindu-Buddhist period, Islamic

period, Colonial period, and contemporary period. There are 55 indoor collections and 3 outdoor collections that were digitised. The indoor collections include ancient human skulls and cultural tools, statues, mock-ups, miniatures, manuscripts and more.

The development process of each collection starts from identifying the shape and type of collection, grouping each period, photographing collections, compiling information, compiling catalogues on Google Sites, making and printing Qr Code. The following is the form of the results of the development of the digitisation of the historical museology laboratory with Qr Code.

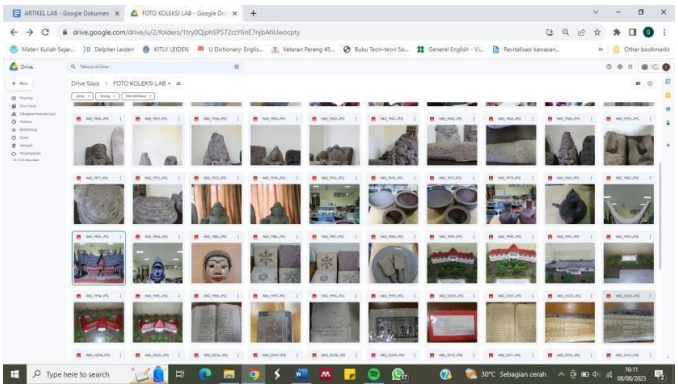

Figure 5. E-Museum Collection Data

Figure 6. Initial View of the E-Museum Catalog

Figure 7. Qr Code on Prehistoric Period Collection

d. Implement

At this stage it becomes a form of implementation of the Qr Code product. Field testing is carried out so that researchers can measure the feasibility and effectiveness of the product. In addition, testing is carried out to assess quality and detect potential shortcomings that may exist. The results of this test will generate

feedback in the form of criticism and recommendations, which will then be used to implement improvements to improve the quality of the Qr Code E-Museum. The products that have been developed will be tested on research subjects, namely students of the Department of History, State University of Malang. To see the response of students, a number of questions were prepared which were distributed in the form of a questionnaire. From the results of the trial, data was obtained in the form of student responses to the following Qr Code-based E-Museum digital catalogue product.

$$P = \frac{\sum x}{n} => \frac{43}{50} \times 100\% = 86\%$$

In the test results obtained a score of 86% which is included in the feasibility category of very effective criteria. It can be meant if the digitisation of the museology laboratory collection (E-Museum) based on qr code becomes one of the historical learning resources that makes it easy to find information from various collections in the museology laboratory for the history learning process. Based on the results of the analysis of student responses, it can be seen that this use can be said to be very effective in improving the quality of learning. The very effective category can be interpreted as easy, flexible, interesting and brings comfort as a learning resource. In the future, the developed product needs to be improved to the maximum so that the function of innovative learning resources is maximised. The Qr Code-based digital catalogue (E-Museum) in its development must also be able to attract student attention, be easy to operate and can be clearly understood.

4. CONCLUSION

The development of information and communication technology has brought about a revolution in the 21st century, from Revolution 4.0 to Society 5.0. The Society 5.0 era focuses on the integration of technology with human life and empowers humans as the centre of innovation. Education is key in creating innovative and adaptive human resources. One component of education that can be collaborated with technology is learning resources. The use of learning resources in the learning process can be through the surrounding environment such as laboratories. The Department of History, State University of Malang has a museological laboratory as a source of learning history. Digitalisation of laboratory collections in the form of digital catalogues with QR codes is a solution as an innovation that increases the effectiveness of history learning. This product was developed using the ADDIE development model with the stages of analyzing, designing, developing, implementing, and evaluating. This development produces a product that has been tested on students with the acquisition of 86% feasibility results. These results show that the qr code product as an innovative history learning resource has been tested in improving the quality of history learning.

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Based on the research results obtained from the development of digitalisation of museology laboratory collections (E-Museum) based on qr code can be used as an innovative learning resource. This historical learning resource can be a reference for contemporary learning that adapts to technology. In addition, the digitisation of museology laboratory collections can also be used as another research variable for future researchers who want to conduct research on similar topics.

REFERENCES

Abdullah, R. (2012). Pembelajaran berbasis pemanfaatan sumber belajar. *Jurnal Ilmiah Didaktika*, *12*(2).

Adlini, M. N., Dinda, A. H., Yulinda, S., Chotimah, O., & Merliyana, S. J. (2022). Metode penelitian kualitatif studi pustaka. *Jurnal Edumaspul*, *6*(1), 974–980.

Afi, M. W., Sayono, J., & Sulistyo, W. D. (2021). Desain Media Katalog Digital Museum Airlangga untuk Siswa Kelas X SMAN 1 Plosoklaten Kediri. *Journal of Education, Humaniora and Social Sciences (JEHSS)*, *4*(1), 229–238.

Anis, M. Z. A., & Mardiani, F. (2022). Digitalisasi sumber belajar sejarah menyongsong pendidikan era 4.0. *Prosiding Seminar Nasional Lingkungan Lahan Basah*, *7*(2).

Ayu, I. W., Zulkarnaen, Z., & Fitriyanto, S. (2022). budaya digital dalam transformasi digital menghadapi era society 5.0. *Jurnal Pengembangan Masyarakat Lokal*, *5*(1), 20–25.

Evawani, L. (2022). Perpustakaan Sebagai Sumber Belajar Di Madrasah. *Jurnal Literasiologi*, *8*(1), 136–143.

Irianto, H. A. (2017). *Pendidikan sebagai investasi dalam pembangunan suatu bangsa*. Kencana.

Khanifah, S., Pukan, K. K., & Sukaesih, S. (2012). Pemanfaatan lingkungan sekolah sebagai sumber belajar untuk meningkatkan hasil belajar siswa. *Journal of Biology Education*, *1*(1).

Laeli, S., & Maryani, N. (2020). Pengelolaan Laboratorium Sebagai Pusat Sumber Belajar Di Sekolah Menengah Atas. *Tadbir Muwahhid*, *4*(1), 59–72.

Maksum, A., & Fitria, H. (2021). Tranformasi dan Digitalisasi Pendidikan Dimasa Pandemi. *Prosiding Seminar Nasional Program Pascasarjana Universitas Pgri Palembang*.

Mu'minah, I. H. (2021). Studi Literatur: Pembelajaran Abad-21 Melalui Pendekatan Steam (Science, Technology, Engineering, Art, and Mathematics) Dalam Menyongsong Era Society 5.0. *Prosiding Seminar Nasional Pendidikan*, *3*, 584–594.

Noorbella, M. D. P., & Widihastuti, W. D. (2018). PENGEMBANGAN MEDIA KATALOG BAHAN UTAMA UNTUK MATA PELAJARAN TEKSTIL DI SMK N PRINGKUKU PACITAN. *Jurnal Fesyen: Pendidikan Dan Teknologi*, *7*(5).

Nuryanti. (2016). PENGGUNAAN MEDIA LABORATORIUM DALAM PEMBELAJARAN SEJARAH (Studi Kasus LaboratoriumSejarah IKIP Veteran Semarang) Nuryanti. *Fpips Ikip Veteran Semarang*, *32*(1), 19–28.

Piliang, M. (2013). Sistem temu kembali informasi dengan mendayagunakan media katalog perpustakaan. *Iqra': Jurnal Perpustakaan Dan Informasi*, *7*(02), 1–8.

Priyantoko, P., & Hasanudin, C. (2022). Digitalisasi bahan ajar bahasa indonesia untuk meningkatkan keterampilan 5c siswa di era society 5.0. *Prosiding Seminar Nasional Daring: Pendidikan Bahasa Dan Sastra Indonesia*, *2*(1), 356–365.

Rahma, I. (2020). Tolak Ukur Perbandingan Negara Indonesia 4.0 (Four Point Zero) Dengan Negara 5.0 (Five Point Zero). *Jurnal Sosial Humaniora Sigli*, *3*(2), 213–219.

Rahmatsyah, M. Z., & Wibawa, A. (2022). Tata krama dan Etika di Era Society 5.0. *Jurnal Inovasi Teknologi Dan Edukasi Teknik*, *2*(8), 367–371.

Rahmawati, M. (2022). *STRATEGI PENDIDIK MENGHADAPI TANTANGAN PEMBALAJARAN ABAD-21 DI ERA REVOLUSI INDUSTRI 4.0*.

Rizali, A. R. (2018). Pengembangan Katalog Laboratorium Sejarah Universitas Negeri Malang Koleksi Hindu-Budha sebagai Media Pembelajaran Sejarah Materi Hindu-Budha. *Skripsi. Universitas Negeri Malang*.

Rosiyanti, H., & Muthmainnah, R. N. (2018). Penggunaan Gadget sebagai sumber belajar mempengaruhi hasil belajar pada mata kuliah matematika dasar. *Fibonacci: Jurnal Pendidikan Matematika Dan Matematika*, *4*(1), 25–36.

Samsinar, S. (2020). Urgensi learning resources (sumber belajar) dalam meningkatkan kualitas pembelajaran. *Didaktika: Jurnal Kependidikan*, *13*(2), 194–205.

Sugiyono, D. (2013). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*.

Sukabumi, A. G.-A. B. S. I. (2016). Penggunaan QR code sarana penyampaian promosi dan informasi kebun binatang berbasis android. *Bianglala Informatika*, *4*(1).

Supriadi, S. (2017). Pemanfaatan sumber belajar dalam proses pembelajaran. *Lantanida Journal*, *3*(2), 127–139.

Syaifulloh, M., & Basuki Wibowo, S. (2014). Pemanfaatan Laboratorium Sejarah Sebagai Sumber Belajar Sejarah (Studi Kasus Mahasiswa Program Studi Pendidikan Sejarah Semester III STKIP PGRI Pontianak). *Sosial Horizon: Jurnal Pendidikan Sosial*, *1*(1), 59–72.

Tegeh, I. M., Jampel, I. N., & Pudjawan, K. (2014). Model penelitian pengembangan. *Yogyakarta: Graha Ilmu*, *88*, 90–92.

Yunanto, S. J. (2004). *Sumber belajar anak cerdas*. Grasindo.

Zulfa, A., & Najicha, F. U. (2022). Urgensi Penguatan Identitas Nasional dalam Menghadapi Society 5.0 di Era Globalisasi. *Jurnal Kalacakra*, *3*(2), 65–71.

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