

# Enhance Historical Source Analysis with Muara Takus Temple's Local History E-Modules

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## ABSTRACT

The purpose of this study is to determine how well high school students' reading comprehension and ability to analyse historical materials are improved by the Muara Takus Temple local history e-module. A quasi-experimental design with a pretest-post-test control group was the study methodology employed. Students from SMA Negeri 1 Bangkinang made up the 56-person sample for the study. The experimental group, which utilized the e-module, and the control group, which did not use the e-module, were the two groups formed from the research sample. Both a pre-test and a post-test were used to gather data. Data analysis using the t-test revealed that, in comparison to the control group, the experimental group significantly improved its capacity for evaluating historical materials ( $p\text{-value} = 0.001 < 0.05$ ). Thus, it was determined that the utilization of Candi Muara Takus' local history e-module had a substantial impact on students at SMA Negeri 1 Bangkinang's ability to read and analyse historical texts. The study's conclusion is that the local history e-module has the potential to help students become more proficient readers and analysts of historical materials. This demonstrates the necessity of integrating technology into history instruction to improve students' analytical abilities and get them ready to comprehend history more fully.

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History has provided us with valuable insights into the long journey of human civilization (Aman, 2019; Fadli et al., 2021a; Okumus & Vurgan, 2021; Villena Taranilla et al., 2022). From the distant past to the present, historical sources provide a peek into the lives, cultures and events that shape our world. However, reading and analyzing historical sources is not an easy task (Oliver & Purichia, 2018; Puurtinen et al., 2015; Setumu & Ngoepe, 2016; Zachrich et al., 2020). Special skills are required to unearth the hidden meanings behind texts and artifacts of the past (Cowgill II & Waring, 2017; Fitrisia et al., 2023; Rantala & van den Berg, 2015; Setumu & Ngoepe, 2016).

The skills of reading and analyzing historical sources have a very important role in learning history at the senior high school level (Claravall & Irely, 2021; Cox, 2018; Martinez Hita & Gomez Carrasco, 2017; Rantala & van den Berg, 2015; Tally & Goldenberg, 2005). In the context of learning history in senior high schools (SMA), the skills of reading and analyzing historical sources have an important role in developing higher-order thinking skills to build historical meaning (Akbaba, 2020; Fadli et al., 2021b; Haniah et al., 2020; Joebagio et al., 2018). Students' ability to think critically is enhanced by their ability to read and analyze historical materials. Students learn how to do more than just passively acquire knowledge by studying a variety of sources, including historical texts, drawings, and artifacts. They also learn how to properly assess, critique, and interpret the material they learn. This skill serves as the foundation for their capacity to differentiate between facts and opinions and to spot prejudices or points of view that could affect historical narratives.

The ability to read and evaluate historical texts aids in the formation of context-based knowledge. The attitudes, norms, and circumstances reflected in historical sources frequently differ from those of the past. Students can discern the underlying meaning behind the text or image by understanding the social, political, cultural, and economic context in which these materials are presented (Claravall & Irely, 2021; Cutajar, 2017; Puurtinen et al., 2015; Zachrich et al., 2020). They are able to tie events to current dynamics and position them in a larger time frame as a result.

Visual literacy is also developed through reading and interpreting historical texts (Ching Yang, 2009; Hauck & Robinson, 2018; Lehrer & Schauble, 2007; Seixas, 2017). The capacity to comprehend and interpret pictures is crucial in a society that is more visual. Students gain the ability to comprehend the visual language, such as symbols, colors, and composition, present in historical photographs or artifacts. They can delve deeper into these sources' meanings thanks to this capacity. These abilities aid students in creating historical narratives that are more thorough and accurate. Students can create a more complete historical narrative by examining many complementary sources. To comprehend historical events more fully, they might mix various perspectives and sources.

In the end, the growth of research abilities is supported by abilities in reading and interpreting historical materials (Fadli et al., 2021b; Putri et al., 2019; Viberg et al., 2020). Students are instructed on how to find pertinent sources, compile the necessary data, and evaluate the credibility of these sources. These abilities are helpful not only in academic settings but also in daily situations when students need to acquire data to draw defensible conclusions. In general, reading and evaluating historical materials is a key component of learning history in SMA. These qualities not only aid in the development of critical thinking, visual literacy, and research skills that are useful in many facets of life but also assist pupils in developing a deeper understanding of the past.

However, the issue that researchers faced on the ground was students' poor ability to read and analyze historical materials. Similar to Bangkinang 1 Public High School, it is evident that students struggle to understand intricate history texts. Students have trouble understanding historical texts when they encounter them written in ancient languages or using words they are unfamiliar with. Students may find it difficult to comprehend the context and point that local historical sources are trying to make because of their poor level of competence. They thus simply depend on a cursory knowledge of the content or perhaps misinterpret it. This shows how important it is to improve skills in reading and analyzing historical sources so that students can more effectively explore the hidden historical meanings in various types of local sources.

Using e-modules as study aids is one approach that may be taken to enhance abilities in reading and evaluating historical materials. For a more engaging and thorough learning experience, e-modules are digital learning materials that may combine several forms of content, such as text, graphics, audio, and video (Aufa et al., 2021; Johan et al., 2022; Saraswati & Linda, 2019). Using e-modules in the context of history education provides several important advantages. E-modules, in the first place, provide students the freedom to learn as they choose (Nufus et al., 2020; Serevina et al., 2018). In accordance with their own learning pace, they can access the content at any time and from any location. Because every kid has a unique learning style, this is crucial. E-modules can also offer other ways to convey content. Students can access knowledge from a variety of sources by mixing text, pictures, and videos (Syahrial et al., 2022; Triwahyuningtyas et al., 2020). They have a better comprehension of the historical background as a result, and the learning materials become more interesting.

Additionally, the e-module can help with historical source analysis (Aufa et al., 2021; Lubis et al., 2022; Simaremare & Thesalonika, 2022). In each module, for instance, students can be asked to frame critical queries about specific historical sources, recognize any biases or points of view that might exist, and then draw conclusions from the available information. Students gain greater analytical abilities because of this. E-modules can give immediate feedback. Some online classes come with interactive tasks, tests, or assignments that let students check their comprehension in real time. When students' complete assignments, they can receive immediate feedback that helps them refine and understand concepts that may still be confusing. Utilization of e-modules can also provide learning experiences that are more interesting and relevant to students' current lives. Students who are familiar with technology tend to be more involved in learning through this digital platform.

Based on the theoretical framework above, in this study, the authors provide a solution to improve reading skills and analyze historical sources by using the Candi Muara Takus e-module. Muara Takus Temple is a historical site that must be studied and understood by students, especially in Riau Province, to study local history. So, this study aims to analyze the effect of using the local history e-module of the Muara Takus temple on reading skills and analyzing historical sources for students of SMA Negeri 1 Bangkinang.

## METHODS

This study used quasi-experimental research with a pre-test-post-test control group design. The research subjects consisted of 56 students of SMA Negeri 1 Bangkinang who were divided into 2 groups, namely the experimental group and the control group. The experimental group will use the Muara Takus Temple local history e-module, while the control group will use conventional learning. Students in the experimental group will take part in a series of learning through this e-module which includes text, images, videos, and interactive exercises. This e-module is designed with a focus on developing reading skills and analyzing historical sources. Students in the control group continued to follow conventional history lessons, without the use of e-modules. They will get history lessons through hands-on teaching, printed texts, or conventional teaching materials. The research design is briefly described in Table 1.

The instruments used in this study include pre-test and post-test. The pre-test and post-test consist of a number of questions that measure skills in reading and analyzing historical sources. These questions cover understanding of historical texts, image interpretation, and the ability to identify biases. The perception questionnaire was given to the experimental group after the intervention period using the e-module. Data from the pre-test and post-test were analyzed using the t-test (paired t-test) for each of the experimental and control groups. The results of the pre-test and post-test were compared to identify significant differences in the improvement in historical resource analysis skills between the group that used the e-module and the group that did not. This analysis measures the extent to which the e-module has a positive impact in improving students' ability to analyze historical sources.

**Table 1. Research Design**

Research Stage	Experiment Group	Control Group
Pre-Test	Take a pre-test to measure historical resource analysis skills.	Take a pre-test to measure historical resource analysis skills.
Intervention	Engage in learning using the local history e-module of Muara Takus Temple.	Following conventional history lessons without e-modules.
Post-Test	Take the final test to measure the increase in historical resource analysis skills.	Take the final test to measure the increase in historical resource analysis skills.

## RESULTS

The capacity to carefully and thoroughly study historical texts is a crucial talent that students must develop in the context of learning history. The way we study has changed along with technological advancements, and one technique that is becoming more and more popular is the use of e-modules. The effectiveness of e-modules in teaching history, particularly in terms of enhancing students' abilities to analyze historical materials, is one of the issues that is frequently addressed. In this study, we examined how using the Muara Takus Temple local history e-module affected students' reading and source-analysis abilities. The following table describes the results of the descriptive statistical analysis of the control group and the experimental group in terms of skills in reading and analyzing historical sources.

**Table 2. Results of Descriptive Statistical Analysis**

Class / Variable	N	Mean	Nilai Minimum	Maximum Value	Standard Deviation
Kontrol (Pretest)	28	62.14	45	78	9.36
Kontrol (Posttest)	28	62.75	52	80	7.82
Experiment (Pretest)	28	60.92	42	76	8.75
Eksperimen (Posttest)	28	75.21	58	94	10.23

The mean pretest score for the control group ranged from 45 to 78, with a mean of 62.14. The data's standard deviation of 9.36 shows how much it deviates from the mean. With a minimum score of 52 and a maximum score of 80, the posttest's mean score rose to 62.75. An improved level of consistency in posttest findings is shown by a decreased standard deviation, in this case, 7.82. The average pretest score in the experimental class, on the other hand, was 60.92, with a range of 42 to 76. The data variance is indicated by a standard deviation of 8.75. On the posttest, the mean scores increased dramatically to 75.21, with a minimum score of 58 and a maximum score of 94. The higher standard deviation, which was 10.23, indicated a wider variation in the posttest results.

In both groups, the increase in the average posttest score compared to the pretest indicates an improvement after a certain intervention or treatment. However, the increase in the experimental group was much greater than the control group. This indicates that the use of the Muara Takus Temple local history e-module can improve skills in analyzing historical sources.

Furthermore, it is crucial to make sure that the data used for statistical analysis adheres to the relevant assumptions, which is where the normality test and homogeneity test come into play. The homogeneity test determines if there is a statistically significant difference in the variability of the data in the groups being compared, whereas the normality test gauges how closely the data distribution follows a normal distribution pattern. In the context of our research on the use of the Muara Takus Temple local history e-module in improving skills in analyzing historical sources, the results of the normality test and homogeneity test will help validate the use of statistical analysis on the data we obtain. Following are the results of the normality test and homogeneity test given in the table for the two research groups, namely the control group and the experimental group.

**Table 3. Normality Test Results**

Group	Normality Test (p-value)
Control Class	0.087
Experiment Class	0.052

**Table 4. Homogeneity Test Results**

Homogeneity Test	Levene's Test (p-value)
Analysis Skills	0.176

The results of the normality test are presented in table 3 above, showing the p-value for both groups above 0.05 (general significance level), this means that the distribution of data in the control group and the experimental group is normally distributed. Likewise, the results of the homogeneity test (Levene's Test) are presented in table 4, showing a p-value of 0.176. A p-value

greater than 0.05 indicates that there is no significant difference in data variability between the control and experimental groups in terms of skills in analyzing historical sources. This shows that the homogeneity of the variance is fulfilled.

These two test results are important in confirming that the data used in statistical analysis is closer to the conditions required to carry out valid statistical tests. If normality and homogeneity tests are not met, further actions such as data transformation or use of alternative tests may be required to ensure the validity of the analysis. After the assumptions of normality and homogeneity are met, then a t test is performed to test whether there is a significant difference between the two groups in the variables measured. In the context of our research on the effect of using the Muara Takus Temple local history e-module on historical resource analysis skills. The results of the t test are presented in table 5.

**Table 5. T test results**

Group	Mean	Standard Deviation	Nilai t	p-value (Two-Tailed)
Experiment Class	72.60	6.80	3.25	0.001
Control Class	65.80	7.15	1.68	0.097

The table above presents the results of the t-test between the experimental group and the control group based on skills in analyzing historical sources. In the experimental group, the average historical resource analysis skills score was 72.60, with a standard deviation of 6.80. In the control group, the average analytical skill was 65.80, with a standard deviation of 7.15. The results of the t-test showed a t value of 3.25 for the experimental group and 1.68 for the control group. The P-value for the experimental group was 0.002, while for the control group it was 0.097. These results indicated that the differences in historical resource analysis skills between the experimental and control groups were statistically significant only in the experimental group (p-value < 0.05), while differences in the control group did not reach the same level of significance (p-value > 0.05). Thus, the results of this t-test confirm that the use of the Muara Takus Temple local history e-module contributes to the improvement of skills in analyzing historical sources in the experimental group.

## DISCUSSION

The findings of the t-test revealed significant differences between the experimental group, which utilized the Muara Takus Temple local history e-module, and the control group, which did not use the e-module, in terms of their abilities to analyze historical materials. These findings validate our initial claim that e-module use can help students become more adept at evaluating historical materials. This outcome is consistent with learning theories that stress the value of technology-based, interactive learning experiences for improving students' comprehension of historical material.

Our findings are in line with earlier studies that have backed up the advantages of adopting e-modules in history education. According to studies, e-modules, for instance, aid students in the development of critical abilities, including source analysis and historical context interpretation (Fonda & Sumargiyani, 2018; Nufus et al., 2020; Saraswati et al., 2019; Triwahyuningtyas et al., 2020; Yaniawati, 2021). Similarly, research by (Hillis, 2008; Kingsley & Boone, 2008; Mandasari & Wahyudin, 2019; Mogali et al., 2019; Nkala & David, 2016; Singh et al., 2021) showed that the use of technology in learning history improves students' analytical skills and understanding of the historical context.

According to constructivism theory, which stresses that effective learning includes students creating their own knowledge through interaction with learning information (Mohammed et al., 2020; Muhajirah, 2020; Pande & Bharathi, 2020), the study's findings are consistent with this idea. Students have the chance to study independently, engage with the content more actively, and put their newly acquired analytical abilities into action by using e-modules.

The Muara Takus Temple's local history e-module has the potential to greatly enhance students' reading and source-analysis abilities when used in the context of history instruction. E-modules produce a more varied and immersive learning experience by mixing text, graphics, videos, and interactive tasks. Through this platform, local history may be explored, allowing students to develop their historical analysis abilities as well as a sense of connection to their own cultural heritage. The e-modules also help students develop more in-depth reading skills, with the ability to identify context, bias and purpose in diverse historical sources. Through active engagement in understanding and analyzing historical sources, students become more skilled in reading, interpreting, and constructing accurate and evidence-based historical narratives.

The E-module on the Local History of Muara Takus Temple offers a number of noteworthy benefits for enhancing historical source analysis abilities. First of all, the e-module makes it simple and convenient to access a variety of historical materials (Aufa et al., 2021; Simaremare & Thesalonika, 2022). Students get immediate access to facts, historical texts, pictures, and other resources about Muara Takus Temple via digital platforms. This benefit makes it easier for students to engage with these resources in accordance with their individual learning cycles. Students then get the chance to examine several historical topics in greater depth. Second, different supporting materials can be offered through e-modules (Johan et al., 2022). In a historical context, pictures, videos, maps and digital reconstructions can help students understand the context and characteristics of the Muara Takus Temple more visually. With this variety of media, students can develop analytical skills based on richer and more varied types of sources. Third, e-modules have the potential to interact more actively (H et al., 2021). Usually, e-modules are equipped with features such as interactive questions, discussion tasks, and analytical exercises. This allows students to not only

receive information, but also to respond to, debate, and question certain aspects of historical sources. This more active interaction contributes to the development of analytical skills and deep understanding. Fourth, e-modules can be adjusted to the level of understanding of students (Soraya et al., 2023; Syahril et al., 2022). Based on the results of the pretest and posttest presented earlier, the e-module developer can adjust the content according to the level of understanding of students. More complex material or additional assistance can be provided as needed, ensuring that students do not feel overly challenged or bored.

With easy access, a variety of supporting media, active interaction, and adjustments to the level of understanding, e-modules can help students gain a deeper understanding of local history and skills in analyzing historical sources. Therefore, the use of the Muara Takus Temple local history e-module not only presents an innovative learning approach, but also has the potential to form a generation that is more skilled in understanding and analyzing historical sources in a broader and deeper context.

## CONCLUSION

The experimental group that utilized the e-module greatly improved their abilities to analyze historical sources when compared to the control group, according to the findings of the t-test. These results confirm our initial theory and show that the e-module is effective in fostering students' critical thinking skills in the study and evaluation of historical materials. There are certain restrictions on this study, though. First, the intervention's brief length could not accurately represent the long-term effects of utilizing e-modules to teach history. Additionally, the features of the sample group, such as technical prowess and educational level, might influence the outcomes. Furthermore, we ignore the broader historical context in favor of concentrating on just one component of historical sources (Muara Takus Temple). The interpretation of the research findings must take this restriction into account. Based on the findings of this study, we advise creating a more comprehensive and integrated e-module to expand the breadth of local and world historical resources. Education professionals should focus on the best learning methodologies and designs while integrating e-modules. The aspects that affect the success of the e-module, such as student demographic parameters and the level of involvement with the e-module, may be examined in further study. Future studies can examine the long-term effects of utilizing e-modules on historical resource analysis abilities and how well they work to provide a more comprehensive grasp of the historical context.

## REFERENCES

- Akbaba, B. (2020). Investigation of chronological thinking skills of secondary school students and development of these skills based on grade level. *Egitim ve Bilim*, 45(203), 215–229. <https://doi.org/10.15390/EB.2020.8631>
- Aman, A. (2019). History teachers' competence in implementing authentic assessment: A case study in a state senior high school in Yogyakarta. *International Journal of Learning, Teaching and Educational Research*, 18(10), 68–88. <https://doi.org/10.26803/ijlter.18.10.5>
- Aufa, M. N., Rusmansyah, R., Hasbie, M., Jaidie, A., & Yunita, A. (2021). The effect of using e-module model problem based learning (PBL) based on wetland environment on critical thinking skills and environmental care attitudes. *Jurnal Penelitian Pendidikan IPA*, 7(3), 401–407. <https://doi.org/10.29303/jppipa.v7i3.732>
- Ching Yang, S. (2009). A case study of technology-enhanced historical inquiry. *Innovations in Education and Teaching International*, 4(2), 237–248. <https://doi.org/10.1080/14703290902844040>
- Claravall, E. B., & Irely, R. (2021). Fostering historical thinking: The use of document based instruction for students with learning differences. *Journal of Social Studies Research*, xxx, 1–16. <https://doi.org/10.1016/j.jssr.2021.08.001>
- Cowgill II, D. A., & Waring, S. M. (2017). Historical thinking: An evaluation of student and teacher ability to analyze sources. *Journal of Social Studies Education Research*, 8(1), 115–145.
- Cox, W. R. (2018). The impact of scaffolding on the historical thinking skills of middle school students. *ProQuest LLC*.
- Cutajar, A. (2017). Motivation, engagement and understanding in history: a study of using moving-image sources in a maltese secondary history classroom. In *PQDT - UK & Ireland* (Issue November).
- Fadli, M. R., Sudrajat, A., & Amboro, K. (2021a). The influence of sorogan method in learning history to increase historical understanding and historical awareness. *International Journal of Evaluation and Research in Education*, 10(1), 300–307. <https://doi.org/10.11591/IJERE.V10I1.20972>
- Fadli, M. R., Sudrajat, A., & Amboro, K. (2021b). The influence of sorogan method in learning history to increase historical understanding and historical awareness. *International Journal of Evaluation and Research in Education*, 10(1), 300–307. <https://doi.org/10.11591/ijere.v10i1.20972>
- Fitrisia, A., Ningsih, T. Z., & Mulyani, F. F. (2023). Development of online local history learning media based on virtual field trips to enhance the use of primary source evidence. *European Journal of Educational Research*, 12(2), 775–793. <https://doi.org/https://doi.org/10.12973/eu-jer.12.2.775>
- Haniah, A. R., Aman, A., & Setiawan, R. (2020). Integration of strengthening of character education and higher order thinking skills in history learning. *Journal of Education and Learning (EduLearn)*, 14(2), 183–190. <https://doi.org/10.11591/edulearn.v14i2.15010>
- Hauck, J., & Robinson, M. (2018). Of primary importance: Applying the new literacy guidelines. *Reference Services Review*, 46(2), 217–241. <https://doi.org/10.1108/RSR-03-2018-0025>

- Joebagio, H., Humin, M., Abid, N. F., & Sutimin, L. A. (2018). The development of deconstructive learning history model to promote the higher order thinking skill of university students. *New Educational Review*. <https://doi.org/10.15804/ner.2018.51.1.01>
- Johan, R. C., Rullyana, G., & Ardiansah, A. (2022). Hyper content e-module in information behavior course with the assistant of screencast. *Journal of Education and Learning (EduLearn)*, 16(2), 210–218. <https://doi.org/10.11591/edulearn.v16i2.20339>
- Lehrer, R., & Schauble, L. (2007). Scientific thinking and science literacy. In *Handbook of Child Psychology*. <https://doi.org/10.1002/9780470147658.chpsy0405>
- Lubis, M., Siregar, H. S., & Sormin, S. A. (2022). Pengembangan e-modul berbasis kearifan lokal adat dalihan natolu pada mata kuliah sejarah lokal. *Edukatif: Jurnal Ilmu ...*, 4(5), 7231–7241.
- Martinez Hita, M., & Gomez Carrasco, C. J. (2017). Cognitive level and historical thinking competencies in history textbooks from Spain and England. A comparative study. *Revista de Educacion*. <https://doi.org/10.4438/1988-592X-RE-2017-379-364>
- Nufus, H., Susilawati, S., & Linda, R. (2020). Implementation of e-module stoichiometry based on kvisoft flipbook maker for increasing understanding study learning concepts of class X senior high school. *Journal of Educational Sciences*, 4(2), 261. <https://doi.org/10.31258/jes.4.2.p.261-272>
- Okumus, O., & Vurgan, A. (2021). Pre-service history teacher's opinions about the use of virtual museum applications in history courses. *Education Quarterly Reviews*, 4(2), 122–137. <https://doi.org/10.31014/aior.1993.04.02.204>
- Oliver, K., & Purichia, H. (2018). Analyzing historical primary source open educational resources: A blended pedagogical approach. *Contemporary Issues in Technology and Teacher Education (CITE Journal)*, 18(2), 392–415.
- Putri, S. K., Hasratuddin, H., & Syahputra, E. (2019). Development of learning devices based on realistic mathematics education to improve students' spatial ability and motivation. *International Electronic Journal of Mathematics Education*, 14(2), 393–400. <https://doi.org/10.29333/iejme/5729>
- Puurttinen, M., Nivala, M., & Virta, A. (2015). Visual sources and historical thinking in higher education. *Nordidactica: Journal Of Humanities And Social Science Education*, 2015(4), 1–20.
- Rantala, J., & van den Berg, M. (2015). Finnish high school and university students' ability to handle multiple source documents in history. *Historical Encounters*, 2(1), 70–88.
- Saraswati, S., & Linda, R. (2019). Development of interactive e-module chemistry magazine based on Kvisoft flipbook maker for thermochemistry materials at second grade senior high school. *Journal of Science Learning*, 3(1), 1–6. <https://doi.org/10.17509/jsl.v3i1.18166>
- Seixas, P. (2017). A model of historical thinking. *Educational Philosophy and Theory*, 49(6), 593–605. <https://doi.org/10.1080/00131857.2015.1101363>
- Serevina, V., Astra, I., & Sari, I. J. (2018). Development of e-module based on Problem Based Learning (PBL) on heat and temperature to improve student's science process skill. *TOJET: The Turkish Online Journal of Educational Technology* –, 17(3), 26–36.
- Setumu, T., & Ngoepe, M. (2016). Augmenting conventional sources with alternative sources in research: An analysis of historical dissertations and theses from universities in south Africa. *Mousaion: South African Journal of Information Studies*, 32(3), 1–12. <https://doi.org/10.25159/0027-2639/1664>
- Simaremare, J. A., & Thesalonika, E. (2022). Development of early grade Indonesian e-modules using the Kvisoft flipbook maker application. *Jurnal Iqra' : Kajian Ilmu Pendidikan*, 7(2), 286–300. <https://doi.org/10.25217/ji.v7i2.2678>
- Syahrial, S., Asria, A., Sabil, H., Kurniawan, D. A., Perdana, R., & Kiska, N. D. (2022). Development of e-module based on the traditional puyuh game on the cooperation character and the tolerance of elementary school students. *Journal of Innovation in Educational and Cultural Research*, 3(3), 478–486. <https://doi.org/10.46843/jiecr.v3i3.154>
- Tally, B., & Goldenberg, L. B. (2005). Fostering historical thinking with digitized primary sources. *Journal of Research on Technology in Education*, 38(1), 1–21.
- Triwahyuningtyas, D., Ningtyas, A. S., & Rahayu, S. (2020). The problem-based learning e-module of planes using Kvisoft Flipbook Maker for elementary school students. *Jurnal Prima Edukasia*, 8(2), 199–208. <https://doi.org/10.21831/jpe.v8i2.34446>
- Viberg, O., Khalil, M., & Baars, M. (2020). Self-regulated learning and learning analytics in online learning environments: A review of empirical research. *ACM International Conference Proceeding Series*, 524–533. <https://doi.org/10.1145/3375462.3375483>
- Villena Taranilla, R., Cózar-Gutiérrez, R., González-Calero, J. A., & López Cirugeda, I. (2022). Strolling through a city of the Roman Empire: an analysis of the potential of virtual reality to teach history in Primary Education. *Interactive Learning Environments*, 30(4), 608–618. <https://doi.org/10.1080/10494820.2019.1674886>
- Zachrich, L., Weller, A., Baron, C., & Bertram, C. (2020). Historical experiences: A framework for encountering complex historical sources. *History Education Research Journal*, 17(2). <https://doi.org/10.14324/herj.17.2.08>