

DEVELOPMENT OF MUSEUM WEBSITES TO ENHANCE HISTORICAL THINKING SKILLS IN HISTORY LEARNING

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Abstrak:

Keterampilan berpikir historis menjadi keterampilan penting yang harus dikembangkan dalam pembelajaran sejarah. Melalui keterampilan berpikir historis, siswa didorong untuk melakukan penyelidikan historis melalui kegiatan mencari, menemukan, menganalisis, merekonstruksi, dan menggeneralisasi suatu peristiwa masa lalu. Ketersediaan sumber-sumber sejarah yang dapat digunakan sebagai informasi dalam rekonstruksi masa lalu, sangat terkait dengan kegiatan investigasi sejarah. Namun, salah satu masalah utama yang dihadapi siswa ketika belajar sejarah adalah kelangkaan bahan sejarah. Untuk meningkatkan kegiatan penelitian sejarah dan menumbuhkan pengembangan kemampuan berpikir sejarah, kita harus mengambil langkah-langkah strategis untuk mengatasi keterbatasan sumber sejarah salah satunya melalui pengembangan website museum. Sehingga, penelitian ini bertujuan untuk mengembangkan website museum sejarah sebagai salah satu pusat sumber sejarah yang dapat diakses dengan mudah oleh siswa guna meningkatkan keterampilan berpikir historis siswa. Metode penelitian pengembangan (R&D) digunakan untuk dalam penelitian ini. Sampel penelitian adalah 180 Siswa Sekolah Menengah Atas yang diambil dari 564 siswa SMA di Kota Pekanbaru melalui teknik purposive sampling. Tahap-tahap penelitian dibagi menjadi tahap analisis permasalahan dan pengembangan website, tahap penyusunan desain website, dan tahap uji validasi ahli, uji coba produk, uji validitas, dan reliabilitas, tahap uji efektivitas produk dalam meningkatkan keterampilan berpikir historis. Instrumen penelitian terdiri dari lembar validasi ahli, lembar uji coba produk, dan tes keterampilan berpikir historis. Pengumpulan data dilakukan melalui observasi, penyebaran angket validasi ahli dan angket uji coba produk, serta tes keterampilan berpikir historis. Data hasil penelitian dianalisis dengan pendekatan kuantitatif melalui uji statistik uji t untuk melihat pengaruh yang diberikan oleh website museum terhadap keterampilan berpikir historis peserta didik. Hasil penelitian menunjukkan bahwa Website Museum yang dikembangkan valid dan reliabel digunakan untuk meningkatkan keterampilan berpikir historis siswa dalam pembelajaran sejarah. Hasil uji t menunjukkan bahwa Website Museum memberikan pengaruh yang signifikan terhadap keterampilan berpikir historis siswa yang dikonfirmasi oleh nilai signifikansi sebesar 0,000 (lebih kecil dari 0,05).

Kata Kunci: *Website, Museum Sejarah, Keterampilan Berfikir Historis, Pembelajaran Sejarah*

Abstract:

The development of historical thinking skills is important for understanding history. The students were supported to investigate historical events through the processes of searching, finding, analyzing, recreating, and generalizing a past event using historical thinking skills. The availability of historical sources, which may be used in the reconstruction of the past, is strongly tied to historical investigative activities. The availability of historical sources, which may be used as evidence in the reconstruction of the past, is strongly tied to historical investigative activities. However, one major issue that students confront when learning history is the scarcity of historical materials. In order to boost historical research activities and foster the development of historical thinking abilities, we should take strategic measures to overcome the limitations of historical sources. Thus, this study aims to develop a history museum website as a center for historical sources that can be easily accessed by students in order to improve students' historical thinking skills. This research utilizes the research and development (R & D) methodology. 180 high school students from Pekanbaru City's 564 high school students made up the research population. This was done using a purposive sampling approach. The research stages are divided into a website development needs analysis stage; website design preparation stages; expert validation testing stages, product trials, validity and reliability tests; and product effectiveness testing stages. The research instruments included product test sheets, expert validation sheets, and tests of historical thinking skills. Data was collected through observation, the distribution of questionnaires for expert validation and product trials, as well as testing of historical thinking skills. The research data were analyzed quantitatively using the t-test statistical test to determine the effect of the museum website on the students' historical thinking skills. The results showed that the museum website developed was valid and reliable to be used to improve students' historical thinking skills in learning history. The t-test results show that the museum website has a significant effect on students' historical thinking skills, which is confirmed by a significance value of 0.000 (less than 0.05).

Keywords: *Website, History Museum, Historical Thinking Skills, History Learning.*

Introduction

The development of science and technology in the modern era has a huge influence on people's lives. The influence of technology, which is growing every day, is no exception in the world of education¹. Conventional learning that gives full power to the teacher as a single source of knowledge turns to books that can be read by everyone. Then, technological developments bring people to the use of the internet which can be a source of learning wherever and whenever needed².

pandemic *Corona Virus Disease 19* has disrupted the entire world and created crises in various fields. Several policies have been taken by the government to minimize mass physical contact, so that it is expected to break the chain of spreading the Covid-19 virus. This policy has an impact on teaching and learning activities that were originally *face-to-face*, then carried out at home through distance learning using online media. As a result, policy makers related to the education system face many problems^{3,4}. Problems encountered such as: (1) unstable signal; (2) limitations of learning tools; (3) the limitations of teachers in the use of technology and psychological problems also arise such as students who feel stressed and anxious because they are cooped up at home, the impact is that students spend less time studying than when learning at school.

The shift in learning from *face-to-face* to distance learning creates greater inequalities in students' cognitive abilities. Other effects also appear such as reduced learning motivation and emotional disturbance of students. Isolation of students from teachers and classmates resulted in "*distribution of behavioral and psychological*". Students from disadvantaged backgrounds experience more stress, for example when they have to share a limited number of digital spaces and devices with other family members. While parents are in this situation, they are under pressure due to financial and work security problems due to the Covid-19 crisis. So, parents cannot provide support to their children in situations like this.

Online media such as *websites, zoom, meet* become an alternative as a solution, teachers and students are required to be able to use various applications that can support the online learning process. The process of interaction between peers and interaction with teachers is very supportive in teaching success. Students appreciate the opportunity to learn online, but the limited interaction between teachers and students, causing learning not to run optimally so that teachers are required to always improve their online teaching skills/ *online teaching pedagogy*⁵.

History learning activities carried out online, make students make history learning the umpteenth choice after other more challenging activities such as

¹ Azmi, Muhammad. Mobile Learning Sejarah Lokal Kalimantan Selatan, *International Conference of Ethnopedagogy, Academia Edu*, 2013.

² Akviansah & Sariyatun, "Perpustakaan Maya sebagai Sumber Belajar dan Penunjang Pembelajaran IPS secara Daring di Era Pandemi Covid-19", *Jurnal Teori Praksis Pembelajaran IPS*, p. 92-102, 2022.

³ Tarkar, P. "Impact of Covid-19 Pandemic On Education System", *International Journal of Advanced Science and Technologi*, p. 3812-3814, 2020.

⁴ Ndoye, J.-L., & Bawa, C. "The Impact of Covid-19 on Education in Ghana", *Asian Journal of Education and Social Studies*, 2581-6268, 2020.

⁵ Pham, Lai, & Nguyen, N. "Online learning amid Covid-19 pandemic: students' experience and satisfaction" *Journal of E-learning and Knowledge Society*, p. 39-48, 2021.

online games, opening social media, or other more interesting activities. To deal with such conditions, history teachers are required to innovate and present history lessons to be more active, challenging and fun. Media *virtual meet* such as *zoom meetings*, *google classroom*, *google meet*, *whatsapp*, etc., history teachers are able to achieve the expected competencies. The Directorate of PSMK (2019) proclaimed the goal of achieving student competencies, namely the 4Cs consisting of: (1) *critical thinking* to be able to solve problems (*problem solving*); (2) *creativity thinking*, where students who have high creativity are able to think and see a problem from various sides or perspectives; (3) *collaboration*, work together or collaborate; and (4) *communication*, students are able to convey their ideas and thoughts quickly, clearly and effectively.

Based on the description above, this research basically tries to provide solutions to various limitations in learning by utilizing technology to facilitate students. Through historical thinking skills, students are encouraged to carry out historical investigations through activities of searching, finding, analyzing, reconstructing, and generalizing a past event. The availability of historical sources that can be used as information in the reconstruction of the past is closely related to historical investigation activities. However, one of the main problems that students face when studying history is the scarcity of historical materials. To increase historical research activities and foster the development of historical thinking skills, we must take strategic steps to overcome the limitations of historical sources, one of which is the development of museum websites. Thus, this study aims to develop a history museum website as one of the historical resource centers that can be easily accessed by students in order to improve students' historical thinking skills.

Research Method

This research is *research and development* (R&D) using the ADDIE model. The research stages are divided into the problem analysis and website development stage, the website design preparation stage, and the expert validation test stage, product testing, validity and reliability testing, the product effectiveness test stage in improving historical thinking skills.

The research sample was 180 high school students taken from 564 high school students in Pekanbaru City through purposive *sampling technique*. The research instrument consisted of expert validation sheets, product test sheets, and historical thinking skills tests. Data was collected through observation, distribution of expert validation questionnaires and product trial questionnaires, as well as historical thinking skills tests.

Results and Discussion

The results of the research on developing a historical museum website are in the form of a website that can be accessed by students and teachers. The purpose of developing a history museum website is to improve the ability to think historically. The aspects that are considered in developing the history museum website are as follows:

Analyze

Analysis Problem analysis/preliminary study is carried out with two activities, namely: (1) literature study and (2) field study. The literature study was carried out by researchers aiming to collect the theoretical basis in developing a history museum website. In the literature study, the researchers looked for factual information about the material presented in history learning through lesson plans and syllabus. Furthermore, the field study was carried out by researchers by conducting direct observations and interviews with teachers and high school students in Pekanbaru City.

The results of the preliminary study found facts that so far both teachers and students are still limited in obtaining historical learning resources. This is because, history is learning related to the past. The history is a story or event that has actually happened or an event that has actually happened or took place in the past, which is then investigated by historical writers from time to time. This opinion is reinforced by Kuntowijoyo⁶ who emphasizes that history is the result of the reconstruction of the past. Teachers must have more ability to present historical events in the present and students can accept them well. However, in the delivery process the teacher experienced several obstacles such as: (1) limited resources because many sources were destroyed; (2) the characteristics of historical sources, especially digital historical sources which are very easy to access, but also easy to manipulate⁷; and (3) the limitations of teachers in the use of ICT⁸.

One of the goals of history learning is for students to acquire historical thinking skills and historical understanding⁹. Through historical thinking skills, students are encouraged to carry out historical investigations through activities of searching, finding, analyzing, reconstructing, and generalizing a past event. The availability of historical sources that can be used as information in the reconstruction of the past is closely related to historical investigation activities. To increase historical research activities and foster the development of historical thinking skills, we must take strategic steps to overcome the limitations of historical sources, one of which is the development of a history museum website.

Development of Website

history museum website is then validated by a team of experts. The validity aspect is obtained at the validation stage of the history museum website. The validation results were obtained from a media expert assessment questionnaire. Validity is an important point in research on the development of a history museum website. The following will present the data from the validation analysis by media experts:

⁶ Kuntowijoyo, *Pengantar Ilmu Sejarah*, Yogyakarta: Benteng Pustaka, 2005.

⁷ Utami, Indah, "Pemanfaatan Digital History untuk Pembelajaran Sejarah Lokal", *Jurnal Pendidikan Sejarah Indonesia*, p. 52-62, 2020.

⁸ Jingga & Ahmad, "Pengaruh Kompetensi Kemahiran Guru dalam Pengajaran terhadap Pencapaian Akademik Pelajar dalam Mata Pelajaran Sejarah", *Juku: Jurnal Kurikulum & Pengajaran Asia Pasifik*, p. 1-11, 2007.

⁹ Dalimam, *Pengantar Filasafat Sejarah*, Penerbit Ombak, Yogyakarta, 2012.

Table 1. Media Expert Validation Results

No.	Name	Total	Average	Description
1.	Expert 1	55	4.23	Very Good
2.	Expert 2	55	4.23	Very Good
Total		110	4.23	Very Good

Source: Learning Media Expert Test Questionnaire

The results of the expert test can be concluded that website development the history museum is rated very well by experts so it is worth using. Judging from the data on the frequency of expert assessments, 73% said it was good and 27% said it was very good. The data on the frequency of media expert assessments are as follows:

Table 2. Distribution of Media Expert Assessment Frequency

No	Criteria	Frequency	Percentage
1.	Very Poor	0	0%
2.	Less	0	0%
3.	Enough	0	0%
4.	Good	40	73%
5.	Very Good	12	27%

After the history museum website was validated by a team of experts, a small group trial was conducted or *small group test*. *Small group test* aims to determine the feasibility of the history museum website. The results of the small group trial showed that the learning process using the history museum website was 46.7% Good, 53.3% enough. The material contained in the history museum website 25% said it was sufficient, 45% said it was good and 30% said it was very good. The media on the history museum website stated that 50% was sufficient, 26.7% was good, and 23.3% said it was very good. distribution of the frequency of assessment in the *Test* be seen in the table below:

Table 3. Distribution of the frequency of assessment of small Group

.	Test	Process		Material		Media	
		N	%	N	%	N	%
1.	Very Poor	0	0%	0	0%	0	0%
2.	Less	0	0%	0	0%	0	0%
3.	Enough	8	53.3%	5	25%	15	50%
4.	Good	7	46.7%	9	45 %	8	26.7%
5.	Very good	0	0%	6	30%	7	23.3%
Total amount		15	100%	20	100%	30	100%

The next step is to test extensively whether the history museum website can be effective to use, then a test is carried out field or *Opentional Field Test*. The results of the *Opentional Field Test*, learning using the history museum website are: 6.17% Less, 28.40% Enough, 48.15% Good, and 17.28% Very Good. The material

contained on the history museum website is 1.85% less, 25.93% Enough, 40.74% Good and 31.48% Very Good. The media used in the history museum website is 6.17% Less, 25.93% Enough, 31.48% Good and 36.42% Very Good. The distribution table for the frequency of assessments in the *Opentional Field Test* can be seen below:

Table 4. Distribution of the frequency of assessments in the Field Test (*Opentional Field Test*)

No.	Criteria	Aspects					
		for Learning		Material		Media	
		Freq.	%	Freq.	%	Freq.	%
1.	Very Poor	0	0%	0	0%	0	0%
2.	Less	5	6.17%	2	1.85%	10	6.17%
3.	Enough	23	28.40%	28	25.93%	42	25.93%
4.	Good	39	48.15%	44	40.74%	51	31.48%
5.	Very good	14	17.28%	34	31.48%	59	36.42%
Total amount		81	100%	108	100%	162	100%

Cognitive Aspects and Effectiveness

Based on the results of the t-test, it can be concluded that H0 is rejected. It is known from the sig value of 0.000 so it is less than 0.05. So it can be concluded that there is a difference in the effect on student achievement scores between the experimental class and the control class. Through these results, it can be concluded that the use of the history museum website has an effect on achievement.

If by using the research criteria the t_{hit} is greater than the t_{tab} , the results obtained are $t_{hit} = 4.980$ compared to $t_{tab} 2.009$ (significance level 5%), so it can be said that $t_{hit} > t_{table}$ or $4.980 > 2.009$. So it can be concluded that the use of the history museum website can improve the thinking skills of high school students in Pekanbaru City. The t-test table for the Experimental Class and Control Class can be seen in the chart below:

Table 5. The results of the t-test of the Experimental Class and Control Class

t-Test Results	Significance
of the Independent Sample Test	0.000

The ability to think historically is a process of cognition/thinking that is owned by everyone in seek truth¹⁰. This ability must be possessed by students (Ofianto, 2017), while the historical thinking process can be carried out with the following stages: (1) determining, describing, identifying, and recognizing; (2) analyze, explain; (3) assess, evaluate; and (4) unite, criticize, create, build¹¹.

¹⁰ Winerburg, S. *Berfikir Historis: Memetakan Masa Depan, Mengajarkan Masa Lalu*. (Terjemahan Masri Maris). Jakarta: Yayasan Obor Indonesia, 2006.

¹¹ Hangrove, L., Godin, D. & Dodd, B. 2008. *Word History Curriculum Framework*. New York: College Board, 2008.

Conclusion

The development of a history museum website to improve students' historical thinking skills was carried out through several assessments, namely: (1) validation of media experts; and (2) material validation. Based on the assessment given by the validation of materials, media and students in field trials, the history museum website was declared eligible to be used as a history museum website. This can be seen from the criteria for assessing the feasibility of the media which shows a minimum value of good. The history museum website is considered effective in improving students' historical thinking skills in high school in Pekanbaru City. Student achievement using the history museum website is higher than using other learning resources such as *PowerPoint*, books, magazines, newspapers, etc. This is indicated by the results of the t-test calculation using the research criteria, the t_{hit} is greater than the t_{tab} coefficient value. The t-test results show that the Museum Website has a significant effect on students' historical thinking skills which is confirmed by a significance value of 0.000 (less than 0.05). So it can be concluded that the use of the history museum website is effective in improving students' thinking skills.

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