Journal of English Language and Education
ISSN 2597- 6850 (Online), 2502-4132 (Print)
Journal Homepage: https://jele.or.id/index.php/jele/index
OPEN ACCESS Article

Development of Problem-Based Learning History Learning Module to Improve Critical Thinking Ability and Learning Achievement

https://doi.org/10.31004/jele.v10i2.723

*Masfiyah, Munthoha Nasuha, Tity Kusrina[123]
[123]Universitas Pancasakti Tegal, Indonesia.
Coresponding Author: masfiyahefi150974@gmail.com

A B S T R A C T

History learning tells the events that occurred in the past, present and future. In its delivery, the teacher uses lecture or conventional methods and the reference book used is less interesting. Researchers tried to develop a feasible problem-based learning-based history module, analyzing the critical thinking skills and learning achievement of students after using this learning module. The development of this learning module uses Research and Development (R & D) with the ADD method (Analysis, Design and Development). Data collection techniques in this study used interviews, observations, questionnaires and tests. The population in this study were students of class X State High School in Brebes totaling 72 people with a sample of 36 students in the experimental class and 36 students in the control class. The research results of the problem-based learning module can improve students' critical thinking skills and learning achievement. The results of media expert validation showed 89.7% with very valid/acceptable criteria and material experts showed 93% with very valid/acceptable criteria. Teacher response to the history learning module was 93% with a very positive category and student response to the learning module was 81% with a very positive category. The test results of critical thinking skills and learning achievement of students have increased the use of problem-based learning modules in the history learning process themed development of Hindu Buddhist kingdoms in the archipelago is more effective than using the lecture model.

Keywords: *Learning Module, Problem Based Learning Model, Critical Thinking Ability, Learning Achievement.*
Article History:
Received 09th February 2025
Accepted 17th March 2025
Published 21st March 2025

INTRODUCTION

A conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by themselves and society through education. Education is able to make students become a quality generation and role models in the future. Education has a central role in shaping individual character and values, as well as in creating good and ethical citizens. Education is a learning process obtained by every human (learner) to be able to make humans (learners) understand, understand, and be more mature and able to make humans (learners) more critical in thinking (Arikunto, 2012: 24).

This innovative and effective learning model has obstacles in implementation that are not as planned. Various innovations in learning methods follow up on the demands of increasingly sophisticated technological developments in the world of education. The development of technology affects the method or model of integrated learning in 21st century education where learning is centered on students in solving problems. The Problem Based Learning (PBL) model is a learning model where students are required to think critically and creatively every time they solve contextual problems (Anwar & Jurotun, 2019). The purpose

of this learning method is to make students more active and able to learn independently with various tasks given to hone participants' abilities.

Problems in classroom reality, the characteristics of history learning in schools are generally still conventional. The characteristics of "traditional" history learning are that the delivery of messages is done by telling stories (lectures). The story is a story that is factually correct, but the interpretation is not necessarily the truth. A teacher is tasked with conveying the message of history to students in a simple and understandable form. The message of the story must be based on historical facts. Learning history has a role in shaping the mindset of students, by learning history all actions taken must be considered in advance so that in the future it does not cause impacts and daily life and its application. Students have difficulty in understanding, analyzing and evaluating the subject matter, because the teacher's explanation and teaching materials are mostly unsupportive and the very long learning duration makes students feel bored, bored and uninteresting. The reality faced so far in history lessons, teachers are often disappointed to find that students still use memorized concepts and are less able to think critically. This will certainly have an impact on the boring and saturating learning process, so that the learning outcomes of students are less than optimal. Moreover, history learning media conventionally uses the lecture method. Teaching materials available at school are less varied and only use textbooks from the government that are less supportive of explaining the material. Supporting the explanation of the material. This makes students experience emphasis in learning in the classroom. In learning history, it does not present things related to in-depth concepts about material that is adapted to the times and human nature.

Therefore, researchers conducted in-depth research on the Development of E-Modules for History Learning based on Problem Based Learning material on Hindu Buddhist Kingdoms in the Archipelago to improve critical thinking skills and learning achievement of grade X students at State High Schools in Brebes Regency.

Literature Review

Electronic Module

Daryanto in (Zahara.S, 2020) states that modules are independent learning packages that are systematically designed to help students achieve learning objectives, along with technological advances modules can be presented in digital format. Modules are teaching materials written by educators themselves to make it easier for students to learn material independently, in the world of education today, there are two types of modules that are widely developed, namely electronic modules and printed modules (Zulhaini in Najuah & Lukitoyo, 2020) The main purpose of making modules in the learning process is to make it easier for students to understand the material taught by educators. The designed module also aims to provide space for students to learn independently and is used by educators as a tool in the learning process (Puspitasari, 2019: 18).

The E-Module feasibility assessment based on the Ministry of Education and Culture Ristek framework, includes a content feasibility component including the suitability of the material with the learning objectives, curriculum suitability, the accuracy of the material with the science taught, the suitability of the material with the cognitive development of students. (Fadieny, 2021: 18), presentation feasibility component, linguistic feasibility, graphic feasibility test The characteristics in the E-Module, including: ((Rahayu et al., 2019: 15) Self instructional, Self contained, Adaptive, User friendly, consistent with font usage, spacing and layout, delivered using a computer-based electronic media, utilizing various functions of electronic media so that it is referred to as multimedia, utilizing various features in software applications, needs to be carefully designed with attention to learning principles.

History Learning

Learning is an organized coalition including elements of energy, materials, equipment, facilities, and procedures to realize learning objectives. Learning is defined as an effort to create student learning or activities to teach learners in the National Education System Law.

Teachers' efforts to ensure that students are engaged in the learning process are better described as learning (Suryani, 2012, 37).

Good history learning will shape historical understanding. Historical understanding is a tendency to think that reflects the positive values of historical events in everyday life, so that we become wiser in seeing and responding to various life problems. Historical understanding guides us to see a series of past events as a system of past actions in accordance with the spirit of the era, but has a set of educational values for present and future life.

The characteristics of history subjects are bound by the dimensions of human, space and time. The human dimension is seen as an agent that creates history, individually or collectively, by looking at the dimensions of thought, mental mysticism, track records or works that become the background of the human being. Then the spatial dimension is seen from the place where an event occurs, within the scope of local, national and global, by drawing connections between one event in one place, with events in other places. The time dimension is seen contextually through the past, present and future, by paying attention to patterns of development, change, sustainability or recurrence of an event. The purpose and function of learning history is to teach students the identity and identity of the nation. History learning is also a vehicle in preserving and passing on noble values to the next generation. This is because the material in learning history has values and benefits that can be applied in everyday life.

Problem Based Learning (PBL)

According to Borrow, Problem Based Learning (PBL) is learning that is acquired through a process towards understanding the resolution or a problem. (Huda, 2019: 271). The syntax of the Problem Based Learning (PBL) model is (1) orienting students regarding the problem at hand; (2) organizing students in learning by forming groups; (3) guiding investigations in groups; (4) presenting results; (5) analyzing results (Sutirman, 2013). Therefore, critical thinking skills become one of the benchmarks to assess whether Problem Based Learning (PBL) learning can affect students' critical thinking skills and learning outcomes. The learning process with the Problem Based Learning (PBL) learning model is characterized by the following characteristics: Learners decide on learning issues. During the learning meeting there are still opportunities to share ideas about problem solving, so it is possible that learning does not take place in one meeting. The educator is a facilitator and does not act as an expert who is the only source of information. Teaching takes place in accordance with the learner-centered Problem Based Learning (PBL) tutorial.

The implementation of the Problem Based Learning model consists of 5 (five) stages of the process, namely the first stage, is the process of orienting students to the problem. In this stage In this stage the teacher explains the learning objectives, explains the necessary logistics, motivates students to engage in problem solving activities, and proposes problems, the second stage, organizing students. At this stage the teacher divides learners into groups, helps learners define and organize learning tasks related to the problem, the third stage, guiding individual and group investigations. at this stage the teacher encourages learners to gather the information needed, carry out experiments and investigations to obtain explanations and problem solving, the fourth stage, developing and presenting results, at this stage the teacher assists learners in planning and preparing reports, documentation, or models, and helps them share tasks with their peers, the fifth stage, analyzing and evaluating the process and results of problem solving. At this stage the teacher helps learners to reflect or evaluate the process and results of their investigation (Trianto, 2009).

Critical Thinking Ability

The ability to think critically is one of the basic capitals or intellectual capital that is very important for everyone and is a fundamental part of human maturity. Based on the explanation of the critical thinking indicators above. There are several factors that influence students' critical thinking, including physical condition, motivation, anxiety, intellectual development. the purpose of critical thinking according to Costa (Amanda, 2018: 53-54) in learning, namely: develop individual abilities to the fullest, both physically, emotionally,

philosophically, aesthetically, and intellectually, prepare students to meet economic needs independently and be ready to face the world of work, teach students to obtain and produce desired needs and services, and manage one's resources efficiently, prioritize responsibility for active participation in society, namely creating an environment conducive to human survival and using it effectively for a more prosperous community. The aspects of critical thinking skills used in this study are as follows. Simple explanation skills, with indicators: formulating questions and limiting problems. Skills in providing advanced explanations, with indicators: testing data and analyzing various opinions casually. Strategy and tactics skills, with indicators: avoiding highly emotional considerations and avoiding oversimplification. Summarizing skills and evaluating skills, with indicators: considering various interpretations and tolerating ambiguity.

Learning Achievement

According to the Big Indonesian Dictionary, achievement refers to the results obtained from actions that have been carried out. Learning, on the other hand, is a process involving all senses that can lead to behavioral changes in individuals, influencing their interactions with themselves, others, and their surroundings (Lefudin, 2014). Based on this understanding, learning achievement can be defined as a measurable skill encompassing knowledge, attitudes, and abilities that result from an individual's learning experience.

Several factors influence student learning achievement, which can be categorized into internal and external factors. Internal factors include intelligence, which, according to Winkel, is the ability to think rationally and interact effectively with the environment (Simanjuntak, 2013). Additionally, motivation plays a crucial role in driving students toward success, while attitude influences how they approach learning, whether positively or negatively. Interest, talent, and concentration also contribute significantly, as students who are interested and naturally talented in a subject tend to perform better, while concentration helps maintain focus and comprehension.

External factors also play a vital role in shaping students' learning achievements. Family support is essential in fostering a conducive learning environment at home, while school factors, such as teaching methods, directly impact students' ability to learn independently. Furthermore, community influences, including a positive and supportive environment, can encourage students to excel academically, reinforcing their motivation and overall learning progress.

METHOD

This research uses a Research and Development (R&D) research approach with the ADD method (Analysis, Design, Development). This study is to analyze the relationship of E learning modules based on problem-based learning on improving critical thinking skills and learning achievement of students in class X State High School in Brebes Regency The research location is SMA Negeri 2 Brebes and SMA Negeri 3 Brebes. The samples in this study were 36 students of class X SMA Negeri 2 Brebes as the experimental class and 36 students of class X SMA Negeri 3 Brebes as the control class. Data collection instruments using questionnaires, documentation, observation and tests. Instrument tests use validity and reliability tests. Prerequisite tests use normality tests, homogeneity tests and t tests.

FINDINGS AND DISCUSSION

Researchers compiled teaching modules for control and experimental classes that had been validated by history teachers. Researchers also prepared critical thinking skills and learning achievement test questions that would be tested in the class. Before being tested, the problem-based learning module was first validated by material experts and media experts. The problem-based learning module assessment was conducted to determine the feasibility of the product from the assessment aspects of media experts and material experts. The results of

the assessment are converted into an assessment of the feasibility of problem-based learning modules from the media and material aspects. The research data according to media experts can be seen in the table below:

Table 1 Results of Product Assessment by Media Experts

Assessment Aspects	Validation			Total Score	Max Score	Percentage (%)	Validation Criteria
	1	2	3				
Cover Design (cover	22	23	25	70	84	83	Very Valid
Introduction Page	10	12	12	34	36	94	Very Valid
Main Section	32	33	35	100	108	93	Very Valid
Closing Section.	12	10	11	33	36	92	Very Valid
Total				**237**	**264**	**89,7**	**Very Valid**

Data on the results of the assessment according to the material expert can be seen in the table below:

Table 2 Results of Product Assessment by Material Experts

Assessment Aspects	Validation			Total Score	Max Score	Percentage (%)	Validation Criteria
	1	2	3				
Content Feasibility	24	24	24	72	72	100%	Very Valid
Language Use	15	16	14	45	48	93%	Very Valid
Presentation	24	24	22	70	80	88%	Very Valid
Graphic Design	15	16	13	44	48	91%	Very Valid
Jumlah				**231**	**248**	**93%**	**Sangat Valid**

Based on the results of the material and media validation test, it can be concluded that the Problem Based Learning-based learning module product developed is very valid and can be tested on students with minor revisions. After the problem-based learning module trial was conducted in an experimental class of 36 students and a control class of 36 students. researchers compiled teaching modules for the control class and experimental class that had been validated by the history teacher. The results of the pre-test and post-test evaluation of critical thinking skills and learning achievement are as follows:

Based on the results of the pretest and posttest of the critical thinking ability of the experimental class, it shows that of the 36 students who took the pre-test, only 17 students were in the complete criteria with an average score of 78.6 and the percentage of learning completeness reached 47.2%, with the number of unfinished students as many as 19 students and a percentage of unfinishedness of 52.8%. Meanwhile, of the 36 students who took the post

test, there were 31 students who were in the complete criteria with an average score of 87 and the percentage of learning completeness reached 86.1%. So, it can be seen that student learning outcomes for the post test (86.1%) are better than student learning outcomes for the pre-test (47.2%) with the percentage of completeness increasing by 38.9%. Meanwhile, the control class showed that of the 36 students who took the pre-test, only 11 students were in the completion criteria with an average score of 72.8 and the percentage of learning completeness reached 30.6%, with the number of incomplete students as many as 25 students and the percentage of incompleteness of 69.4%. Meanwhile, of the 36 students who took the post test, there were 29 students who were in the complete criteria with the acquisition of an average score of 83.6 and the percentage of learning completeness reached 80.6% with the number of students who were not complete as many as 7 students and the percentage of incompleteness was 19.4%. So, it can be seen that student learning outcomes for the post test are better than student learning outcomes for the pre test with the percentage of completeness increasing by 50%.

The results of learning achievement data based on the table above show that of the 36 students who took the pre-test, only 16 students were in the complete criteria with an average score of 62.6 and the percentage of learning completeness reached 44.4%, with the number of students who were not complete as many as 20 students and the percentage of incompleteness was 55.6%. Meanwhile, of the 36 students who took the post test, there were 29 students who were in the complete criteria with an average score of 7.01 and the percentage of learning completeness reached 80.6% with 7 students who were not complete and the percentage of incompleteness was 19.4%. So, it can be seen that the learning outcomes of students for the post test are better than the learning outcomes of students for the pre-test with the percentage of completeness increasing by 36.2%.

Based on the table above, it shows that of the 36 students who took the pre-test, only 17 students were in the complete criteria with an average score of 75.9 and the percentage of learning completeness reached 47.2%, with 19 students who were not complete and the percentage of incompleteness was 52.8%. Meanwhile, of the 36 students who took the post test, there were 32 students who were in the complete criteria with an average score of 88.2 and the percentage of learning completeness reached 88.9% with the number of students who were not complete as many as 4 students and the percentage of incompleteness was 11.1%. So, it can be seen that student learning outcomes for the post test are better than student learning outcomes for the pre test with the percentage of completeness increasing by 41.7%.

Assessment of teacher and learner responses to the learning module obtained the following results:

Table 3 Recap of Teacher Response Results

Assessment Aspects	Validation				Total Score	Max Score	Percentage (%)	Validation Criteria
	1	2	3	4				
Isi Materi	23	24	24	23	94	96	97	Sangat Positif
Penyajian,	30	32	29	32	123	128	96	Sangat Positif
Kebahasaan	16	16	16	16	64	64	100	Sangat Positif
Kegrafisaan	27	28	22	26	103	112	91	Sangat Positif
Jumlah					**376**	**405**	**93**	**Sangat Positif**

Data on the results of the assessment according to the responses of students can be seen in the table below

Table 4. Recapitulation of Learner Response Results

Students Response	Assessment Aspect				Total
	Material	Performance	Language	Benefit	
1	18	21	10	16	
2	24	24	12	20	
3	21	23	12	18	

4	21	21	11	13
5	14	20	11	14
6	16	18	9	13
7	17	18	9	16
8	17	18	9	16
9	18	18	10	15
10	19	22	10	19
Jumlah Skor	185	203	103	160
Skor Maks	240	240	120	200
Prosentase (%)	77	84	86	80
Kriteria Validasi	Positif	Sangat Positif	Sangat Positif	Sangat Positif

Validity and Reliability Test

The item validity test on the instrument is a process to determine the extent to which the items in an assessment instrument are able to measure what should be measured precisely and consistently. The results of the validity test of the critical thinking ability instrument and learning achievement using the spss v25 application are presented in the following table:

Table 5 Validity of Critical Thinking Ability Instrument

No	r count	r table	Decision Criteria	Result
1	0,478	0,05	If r count ≥ r table, then the question is valid. If r count ≤ r table, then the question is not valid.	valid
2	0,478			valid
3	0,062			valid
4	0,100			valid
5	0,030			valid
6	0,072			valid
7	0,117			valid
8	0,073			valid
9	0,128			valid
10	0,087			valid
11	0,283			valid
12	0,191			valid
13	0,657			valid
14	0,774			valid
15	0,879			valid
16	0,813			valid
17	0,885			valid
18	0.919			valid
19	0,874			valid
20	0,795			valid

The results of the critical thinking ability instrument validity test show that 20 items have a count greater than r table of 0.05 so that the 20 items are declared valid.

Table 6 Validity of Learning Achievement Instrument

No	r count	r table	Decision Criteria	Result
1	0,359			valid
2	0,248			valid
3	0,009			valid
4	0,234			valid
5	0,364			valid
6	0,184			valid
7	0,527			valid
8	0,672			valid
9	0,441			valid
10	0,355			valid
11	0,602			valid
12	0.126			valid
13	0,187			valid
14	0.326			valid

15	0.368		valid
16	0.447		valid
17	0,562		valid
18	0,270		valid
19	0,421		valid
20	0,500		valid

The results of the validity test of the learning achievement instrument show that 20 items have r count greater than r table of 0.05 so that the 20 items are declared valid.

Table 7. Reliability Test of Critical Thinking Ability and Learning Achievement Instruments

Research Variable	***Cronbach Alpha***	***Cronbach Alpha* Reference**	Decision Criteria	Decision
Critical Thinking Ability	0,843	0,05	If Cronbach's Alpha (calculated) ≥ Reference Cronbach's Alpha, then the instrument is reliable. If Cronbach's Alpha (calculated) < Reference Cronbach's Alpha, then the instrument is not reliable.	Reliable
Learning Achievement	0, 631	0,05		Reliable

The results of testing the reliability of critical thinking skills show that the calculated Cronbach Alpha value of 0.843 is greater than the reference Cronbach Alpha value of 0.05. So it can be said to be reliable. While the results of learning achievement show the calculated Cronbach Alpha value of 0.631 greater than the reference Cronbach alpha value of 0.05. Then it can be said to be reliable. It can be concluded that the instrument can be used as a data collection tool.

Normality Test

The decision-making basis for the normality test is as follows: (a) if the value (sig > 0.05), then the data is normally distributed, (2) if the value (sig < 0.05), then the data is not normally distributed. The normality test was carried out using SPSS 25, namely the Shapiro Wilk normality test. The results of the normality test can be presented in the following table:

Table. 8 Normality Test of Research Instruments with Shapiro Wilk Test

Research Variable	Class	Reference Sig.	**Sig**	Decision Criteria	**Decision**
Critical Thinking Ability	Experiment	0.05	0.146	Accept Ho if Sig. (2-tailed) ≥ α = 0.05. Reject Ho if Sig. (2-tailed) < α = 0.05.	Ho accepted
	Control	0.05	0.051		Ho accepted
Learning Achievement	Experiment	0.05	0.131		Ho accepted
	Control	0.05	0.122		Ho accepted

The normality test results show that the pretest experimental class has a significance value of 0.146. > 0.005 so that it is declared normally distributed. While the post test experimental class has a significance value of 0.131> 0.005 so that it is declared normally distributed. The pretest control class normality test has a significance value of 0.051. > 0.005 so that it is declared normally distributed. While the post test control class has a significance value of 0.122> 0.005 so that it is declared normally distributed.

Homogeneity Test

The homogeneity test of this study can be presented in the table below:

Table 9 Homogeneity Test Results with Levene's Test.

Research Variable	Reference Sig.	Sig count	Decision Criteria	Decision
Critical Thinking Ability	0.05	0.892	Accept Ho if Sig. (2-tailed) ≥ α = 0.05. Reject Ho if Sig. (2-tailed) < α = 0.05.	Ho accepted (both data groups have the same variance)
Learning Achievement	0.05	0.006		

The homogeneity test is seen through the significance value based on the median (based on median). The homogeneity test results of the calculated significance value of 0.892> 0.05 so that the pretest and postest data have homogeneous data variance. While on learning achievement homogeneity significance value calculated at 0.006 <0.05 so that the pretest and postest data do not have homogeneous data variance. So it can be concluded that the homogeneity test is only on critical thinking skills.

Test t

The t test on critical thinking skills and learning achievement instruments. The results of the t test can be presented in the table below:

Table 10. Differential Test of Two Means (t test) using SPSS

Research Variable	Reference Sig.	**Sig count**	Decision Criteria	Decision
Critical Thinking Ability	0.05	0,00	If Sig. (2-tailed) ≥ α = 0.05, then the hypothesis is rejected. If Sig. (2-tailed) < α = 0.05, then the hypothesis is accepted.	Hypothesis accepted
Learning Achievement	0.05	0,00		Hypothesis accepted

The t-test results show that the significance value of critical thinking ability is 0.00 and the significance value of learning achievement is 0.00. This shows that there is a significant difference between the experimental class and the control class or the hypothesis is accepted.

.

Discussion

The development of a problem-based learning module on the development of Hindu Buddhist Kingdoms in the archipelago for class X SMA totaling 72 students. This module development uses the R and D (Research and Development) method with the ADD (Analysis, Design and Development) model.

Analysis

The analysis stage in this study includes analyzing the needs of students, analyzing materials and analyzing the characteristics of students. In analyzing the needs of students, it is known from filling out a needs questionnaire to identify existing problems in learning class X history in Brebes Regency State High School. Analysis of the needs of students found problems in the history learning process is monotonous and boring. The lack of supporting books in learning makes students lazy to learn. Students expect to have a learning module that can attract interest in reading.

Teacher needs analysis is limited to using methods, media and learning resources provided by the school. Packet books as handbooks are felt to be incomplete to explain existing historical material. Therefore, the researchers developed a problem-based learning module on

the development of Hindu Buddhist Kingdoms in the Archipelago. It is expected that the module can improve students' critical thinking skills and learning achievement.

Planning/Design

The design of learning modules based on problem-based learning material on the development of Hindu Buddhist Kingdoms in the archipelago has been made module cover / cover, preparation of module design and preparation of instrument grids and learning module research materials.

Development

The product development stage in the form of historical learning modules is validated by media experts and material experts. The history learning module validated by media experts reached a percentage of 89.7% which means the module is very feasible/valid to use. Validation of the learning module by material experts reached 93% which means that the module is valid or very feasible to use in the learning process.

The teacher's response to the problem-based learning module of history learning as many as 25 questions obtained an average score of 376 with a percentage of 93% and in a very positive category. Students' response to the problem-based learning module of history learning as many as 20 questions obtained an average score of 651 with a percentage of 81% and in a very positive category.

The critical thinking ability instrument and learning achievement of class X students were tested using SPSS 25. The results of the critical thinking ability instrument validity test showed that all 20 items' r values were greater than r table of 0.05. This shows that the 20 items are declared valid. Meanwhile, the results of the validity test of the learning achievement instrument show that all r values of 20 items are greater than r table of 0.05. This indicates that the 20 items of the learning achievement instrument are declared valid.

Test the reliability of the items using the Cronbach Alpha method. The results of testing the reliability of critical thinking skills show that the calculated Cronbach Alpha value of 0.843 is greater than the reference Cronbach Alpha value> 0.60. So it can be said to be reliable. While the results of learning achievement show the calculated Cronbach Alpha value of 0.631 is greater than the reference Cronbach Alpha value> 0.60, so it can be said to be reliable. The results of the critical thinking ability and learning achievement reliability test are reliable measuring instruments and are used as data collection tools.

The normality test shows the significance value on critical thinking ability for the experimental class is 0.146 and the control class is 0.051. The significance value on learning achievement for the experimental class was 0.131 and the control class was 0.122. This shows that the calculated significance value is greater than the table significance value of 0.05 (5%) so that Ho is accepted or declared normally distributed.

The homogeneity test on the critical thinking ability instrument and learning achievement shows the calculated significance value of critical thinking ability of 0, 892 and learning achievement of 0.006. This shows that the critical thinking ability homogeneity test is declared to have a homogeneous data variant. While the homogeneity test of learning achievement is declared not to have a homogeneous data variant. The t test results show that the significance value of critical thinking ability is 0, 00 and learning achievement is 0.00. This shows that there is no significant difference between the experimental class and the control class.

The average value of critical thinking skills of the experimental class before using the problem-based learning module of History learning is 78.6. After using the History learning module based on problem-based learning, the average value of critical thinking skills was 87. While the control class average value of critical thinking skills before using the problem-based

learning module of History learning is 72.8. After using the History learning module based on problem-based learning, the average value of critical thinking skills was 82.6.

The average value of the experimental class learning outcomes before using the problem-based learning module of History learning is 626. After using the History learning module based on problem-based learning, the average value of learning outcomes was 7.01. While the control class the average value of learning outcomes before using the problem-based learning module of History learning is 75.9. After using the History learning module based on problem-based learning, the average value of learning outcomes was 88.2.

The results of the pretest evaluation of the critical thinking skills of the experimental class showed that of the 36 students who achieved completeness, 17 students with a percentage of 47.2% and those who did not achieve completeness were 19 students with a percentage of 52.8%. While the results of the posttest evaluation of the critical thinking skills of the experimental class showed that out of 36 students who reached completeness, 31 students with a percentage of 86.1% and those who did not reach completeness were 5 students with a percentage of 13.9%.

The results of the pretest evaluation of critical thinking skills of the control class showed that out of 36 students who reached mastery as many as 11 students with a percentage of 30.6% and those who did not reach mastery were 25 students with a percentage of 69.4%. While the results of the posttest evaluation of the critical thinking skills of the control class showed that out of 36 students who reached completeness, 29 students with a percentage of 80.6% and those who did not reach completeness were 7 students with a percentage of 19.4%.

The results of the pretest evaluation of the learning achievement of the experimental class showed that out of 36 students who reached mastery as many as 16 students with a percentage of 44.4% and those who did not reach mastery were 20 students with a percentage of 55.6%. While the results of the posttest evaluation of the learning achievement of the experimental class showed that of the 36 students who reached completeness, 29 students with a percentage of 80.6% and those who did not reach completeness were 7 students with a percentage of 19.4%.

The results of the pretest evaluation of the learning achievement of the control class showed that of the 36 students who reached completeness, 17 students with a percentage of 47.2% and those who did not reach completeness were 19 students with a percentage of 52.8%. While the results of the posttest evaluation of the learning achievement of the control class showed that out of 36 students who reached completeness, 32 students with a percentage of 88.9% and those who did not reach completeness were 4 students with a percentage of 11.1%.

CONCLUSIONS

The research and development of problem-based learning modules enhance critical thinking skills and learning achievement, it can be concluded that the History learning module on the development of Hindu-Buddhist Kingdoms in the archipelago is feasible and effective for improving students' critical thinking and academic performance. The module was developed based on student needs and teacher interviews and was validated by media experts with a score of 89.7% and material experts with a score of 93%, both categorized as highly valid. Teacher responses indicated an eligibility score of 93%, while student responses reached 81%, both classified as highly positive. The module's effectiveness was further confirmed by a t-test, which showed a significant difference in students' critical thinking and learning achievement (Sig. 0.00 < 0.005). Therefore, this module can be implemented by teachers as a teaching material to enhance critical thinking skills and learning outcomes, with potential for adaptation to historical topics suited to students' characteristics and learning needs. Limited dissemination was conducted at SMA Negeri 2 Brebes and SMA Negeri 1 Losari, with the module recommended as a teaching reference and supplementary reading material. Future developments could expand problem-based learning modules for other historical subjects, ensuring their relevance and effectiveness in history education.

ACKNOWLEDGMENTS

The author would like to express sincere gratitude to all those who have supported and contributed to the successful completion of this thesis. Special thanks go to Dr. Taufiqulloh, M.Hum, Rector of Pancasakti University Tegal; Dr. Fajara Ari Sadewo, S.H, M.H, Director of the Postgraduate Program at Pancasakti University Tegal; and Dr. Suriswo, M.Pd, Head of the Master of Pedagogy Study Program at Pancasakti University Tegal, for their invaluable support. The author is also deeply grateful to Dr. Munthoha Nasuha, M.Pd, as the first supervisor, for his guidance, direction, and time dedicated to assisting in the preparation of this thesis, as well as to Dr. Tity Kusrina, M.Pd, as the second supervisor, for her continuous support, guidance, and valuable insights throughout this research process.

REFERENCES

Abd. Rahman Shaleh. 2004. *Psikologi Suatu Pengantar dalam Perspektif Islam.* Jakarta: Prenada Media.

Abdul Hadis. 2006. *Psikologi dalam Pendidikan*. Bandung: Alfabeta.

Abdullah, Aminol Rosid., Rosyid Moh.Syaiful, dan Mustajab. 2019. *Prestasi Belajar*. Malang: Literasi Nusantara.

Abubakar, R. 2020. *Pengantar Metodologi Penelitian*. Yogyakarta: SUKA-Press UIN Sunan Kalijaga.

Ade, Sanjaya. 2011. *Model-model Pembelajaran*. Jakarta: Bumi Aksara

Agung, Nunuk Suryani. 2012. *Strategi Belajar Mengajar*. Yogyakarta: Ombak. Almira Keumala Ulfah, dkk, 2022. *Ragam Analisis Data Penelitian (Sastra, Riset dan*

Agung, Leo & Sriwahyuni. 2013. *Perencanaan Pembelajaran Sejarah.*

Aman. 2011. *Model Evaluasi Pembelajaran Sejarah*. Yogyakarta: Ombak.

Anbaul Ulum Pakis – Kabupaten Malang. Fakultas Ilmu Tarbiyah dan keguruan. Malang: Universitas Islam Negeri Maulana Malik Ibrahim Malang.

Andi Prabowo. 2008. *Panduan Kreatif Membuat Bahan Ajar Inovatif*, Yogyakarta: Tiara Wacana.

Anitah, S .2007. *Strategi pembelajaran*. Jakarta: Universitas Terbuka.

Anwar, K., & Jurotun, J. (2019). *Peningkatan Aktivitas dan Hasil Belajar Siswa SMA Pada Dimensi Tiga Melalui Model Pembelajaran PBL Berbantuan Alat Peraga. Kreano, Jurnal Matematika Kreatif-Inovatif, 10* (1).

Ardianti, Resti , Eko Sujarwanto, Endang Surahman. 2021. *Problem-based Learning: Apa dan Bagaimana.* DIFFRACTION: Journal for Physics Education and Applied Physics http://jurnal.unsil.ac.id/index.php/Diffraction e-ISSN: 2685-7723

Arikunto, S. 2002. *Metodologi Penelitian Suatu Pendekatan Proposal*. Jakarta: Rineka Arikunto Suharsimi, 2012. *Evaluasi Program Pendidikan Pedoman Teoritis Praktis Bagi.*

Arikunto, S. 2018. *Dasar-dasar Evaluasi Pendidikan Edisi 3*. Jakarta: Bumi Aksara. Arismantoro. 2008. *Character Building*. Yogyakarta: Tiara Wacana.

Ashabul Kahfi, X"*Implementasi Profil Pelajar Pancasila Dan Implikasinya Terhadap Karakter Peserta didik Di Sekolah*", *Jurnal Pendidikan Dan Pemikiran Dasar* 5 , no. 2 (2022 d: 139 diakses pada 20 November, 2022,

Aysi, S. A. ., & Noviani, L. (2023). *E-Modul interaktif berbasis technopreneurship pada pembelajaran proyek wirausaha*. *Jurnal Pendidikan Ekonomi*, *16*(1), 53–63.

Azizah, M., Sulianto, J., & Cintang, N. 2018. *Analisis kemampuan berpikir kritis Siswa sekolah dasar pada pembelajaran matematika kurikulum 2013*. *Jurnal Penelitian Pendidikan*, *35*(1),61-70.

Bakhtiar, F. A., & Untuk, C. 2018. *Pengembangan Aplikasi Berbasis Multimedia pada Pembelajaran Tematik Kelas III Sekolah Dasar.*

Basmal, J. 2015. *Efektivitas Pembelajaran*. Jakarta: Penebar Swadaya.

Cahyadi, A. .2019. *Pengembangan Media dan Sumber Belajar Teori dan Prosedur.*

Dedi Kuswadi&, C. K. 2021. *Pengembangan E-Modul sebagai media literasi digital pada pembelajaran abad 21.* Academia Publication. *v*

Depok: Rajawali Press.
Donni Juni Priansa. 2004. *Kinerja dan Profesionalisme Guru*. Bandung: CV Alfabeta. Eni Susilawati Dan Saleh Sarifuddin, "*Internalisasi Nilai Pancasila Dalam Pembelajaran Melalui Penerapan Profil Pelajar Pancasila Berbantuan Platform Merdeka Mengajar*", *Jurnal Teknodik* 25, no. 2 (2021): 161 diakses pada 28 November,2022.
Ennis, R. H. (2015). *Critical thinking: A streamlined conception. Teaching Philosophy*, 14, 5– 25. https://doi.org/10.1057/9781137378057.0005 Euis Karwati dan Donni juni Priansa. 2014. *Manajemen Kelas*. Bandung: Alfabeta.
Erzatama Karya Abadi.
Fadieny, Nurul dan Ahmad Fauzi. 2021. *Validiatas E Modul Fisika Terintegrasi Materi Bencana Petir Berbasis Experimental Learnin*g dalam Jurnal Penelitian Pembelajaran Fisika 7, No. 1 (31 Maret 2021)
Fauzan, M. 2021. *Pengembangan Modul Inovatif dalam Pembelajaran Bahasa Arab*.P rosiding Konferensi Nasional Bahasa Arab Universitas Negeri Malang.
Febriana, R.. 2019. *Kompetensi Guru*. Jakarta: Bumi Aksara.
Feriyanti, N. 2019 . *Pengembangan e-modul matematika untuk siswa SD. Teknologi Pendidikan Dan Pembelajaran*, Jurnal Pendidikan Guru SD.
Filasaime , D.K. 2008. *Menguak Rahasia Berpikir Kritis dan Kreatif*. Jakarta: Prestasi Pustakarya.
Hakim, F. 2020. *Pengembangan E-Modul Sejarah Masuknya Islam DI Kabupaten Pekalongan Berbasis Project Based learning Terhadap Minat Belajar Siswa Kelas X IPS SMAN 1 Kedungwuni*. Jurusan Sejarah Fakultas Ilmu Sosial. Semarang: Universitas Negeri Semarang.
Hamruni. 2012. *Strategi dan Model-model Pembelajaran Aktif Menyenangkan*.Yogyakarta: Investidaya
Hamzah, A. 2019. *Metode Peneltian dan Pengembangan* . Malang: Literasi Nusantara Abadi.
Hariyanto, Y., & Sugianti. 2020. *Penelitian Pengembangan Model Addie dan R2D2*.
Haryanti, Yuyun Dwi. (July 1, 2017) ."*Model Problem Based Learning Membangun Kemampuan Berpikir Kritis Siswa Sekolah Dasar*." Jurnal Cakrawala Pendas 3, no. 2.
Haryanti, Yuyun Dwi. 2017 ."*Model Problem Based Learning Membangun Kemampuan Berpikir Kritis Siswa Sekolah Dasar*." Jurnal Cakrawala Pendas 3, no. 2.
Hendra Surya, *Strategi jitu mencapai kesuksesan belajar* , Jakarta: Elek Media Komputindo, 2011, h.129
Hikmawati, F. 2020. *Metodologi Penelitian*. Depok: Rajawali Pers.
I Wayan Eka Santika, "*Penguatan Nilai-Nilai Kearifan Lokal Bali Dalam Membentuk Profil Pelajar Pancasila*", *Jurnal Pendidikan Dan Konseling* 4, no. 4 (2022): 6191 diakses pada 28 November, 2022, Jogiyanto Hartono, 2018. *Metoda Pengumpulan dan Teknik Analisis Data*, Yogyakarta: Andi.
Inanna, Nurjanah, Andi Tenri Ampa, Nurdiana. 2021. *Moduk Elektronik (E modul) sebagai Media Pembelajaran Jarak jauh*. Universitas Negeri Makasar dalam Semiar Nasional Hasil penelitian 2021 tentang Penguatan Riset, Inovasi dan Kreativitas Peneliti di Era Pandemi Covid 19.
Irdayanti, Lieska Sukma. 2018. *Tingkat Kemampuan Berpikir Kritis Matematis Siswa di SMPN 1 Kedungwaru Melalui Pemberian Soal Open-Ended Materi Teorema Pythagoras Tahun Ajaran 2017/2018*. Skripsi. Tulungagung: Jurusan Tadris Matematika IAIN Tulungagung.
Irkhamni, I., Izza, A. Z., Salsabila, W. T., & Hidayah, N. 2021. *Pemanfaatan Canva Sebagai E-Modul Pembelajaran Matematika Terhadap Minat Belajar Peserta Didik*. Prosiding Konferensi Ilmiah Pendidikan.
Julia Bea Kurniawaty Dan Santyo Widayatmo, "*Membumikan NilaiNilai Pancasila Dalam Dunia Pendidikan Di Indonesia*", *JAGADDHITA: Jurnal Kebhinekaan Dan Wawasan Kebangsaan* 1, no. 1 (2021): 20 diakses pada 28 November, 2022.
Kasmadi, Nia Siti S. 2014. *Panduan Modern Penelitian Kuantitatif*. Bandung Penerbit Alfabeta.

Kemendikbud. 2022. *Pedoman Kurikulum Dalam Rangka Pemulihan Pembelajaran*: *Menteri Pendidikan, Kebudayaan, Riset, Dan Teknologi*

Kemendikbudristek, 2022. *Dimensi, Elemen, dan Sub elemen Profil Pelajar Pancasila.* Jakarta: BSNP.

Kherid, Z. Y. 2009. *Sumber Belajar dari Berbagai Macam Sumber*. Jakarta:State University.

Kuncahyono, & Aini, D. F. N. 2020. *Pengembangan Pedoman E-Modul Berorientasi Student Active Learning Sebagai Pendukung Pembelajaran di Sekolah Dasar.* Jurnal Pendidikan Dasar Nusantara, 5(2), *292–304*

Kuntowijoyo. 2013. *Pengantar Ilmu Sejarah*. Yogyakarta: Tiara Wacana.

Lefudin. 2014. *Belajar dan Pembelajaran*. Yogyakarta: Depublish Publisher cet, 1, Lestari, K. E., & M. R. Yudhanegara. 2018. *Penelitian Pendidikan Matematika.* Bandung : Refika Aditama.

Lestari, Wijayanti. *Proses Berpikir Siswa dalam Memecahkan Masalah Matematika Open Ended Ditinjau dari Kemampuan Matematika Siswa* 215 *dan Jenis Kelamin pada Materii Kubus dan Balok.* Jurnal ilmiah pendidikan matematika volume 2 no.06 tahun 2012. Issn:2301- 9085

Lisyanti, D. 2019. *Pengembangan E-Modul Matematika Berbasis Exe-Learning Pada Siswa SMP Kelas VII.* Fakultas Tarbiyah dan Keguruan (pp. 52-55). Lampung: Universitas Islam Negeri Raden Intan Lampung.

M. Andi Setiawan 2017. *Belajar dan Pembelajaran*. Yogyakarta: Uwais Inspirasi Indonesia.

Manik, Grace. 2023. *Pengembangan E Modul Interaktif Berbasis Pendekatan Kontekstual untuk Meningkatkan Ketrampilan Berpikir Kritis Siswa pada Materi Sel Elektrolisis Kelas XII SMA*. Program Studi Pendidikan Kimia Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam Fakulatas Keguruan dan Ilmu Pendidikan Universitas jambi..

Mardiani, N., Umasih, & Winarsih, M. 2019. *Materi Sejarah Masa Hindu-Buddha dan Penggunaan Sumber Belajar Sejarah dalam Pembelajarannya di SMK*. Kampung Jurnal IAIN Syekh Nurjati, 329-330.

Maunah, Binti. 2015. *Impelmetasi Pendidikan Karakter dalam pembentukan Kepribadian Holistik Siswa*. Jurnal Pendidikan karakter Tahun V Nomor 1 April.

Meilin Nuril Lubaba Dan Iqnatia Alfiansyah, *"Analisis Penerapan Profil Pelajar Pancasila Dalam Pembentukan Karakter Peserta Didik Di Sekolah Dasar", Edusaintek: Jurnal Pendidikan, Sains Dan Teknologi* 9, no. 3 (2022): 695 diakses pada 20 November, 2022.

Menengah, D. P. 2017. *Panduan Praktis Penyusunan E-modul. Kementerian Pendidikan dan kebudayaan*. Direktorat Pembinaan SMA.

Miftahul Huda. 2019. *Model-model Pengajaran dan Pembelajaran*. Yogyakarta: Pustaka Pelajar.

Moh. Zaiful Rosyid, dkk, 2019. *Prestasi Belajar*. Malang: Literasi Nusantara Abadi.

Moleong, Lexy J. 2007. *Metodologi Penelitian Kualitatif*. Bandung: PT Remaja Rosdakarya Offset, Bandung.

Muhamad Irgi Abdillah Az-zarkasyi. 2024. *Penerapan Metode Problem Based Learning (PBL) dalam Kurikulum Merdeka*. GURUKU: Jurnal Pendidikan dan Sosial Humaniora Vol. 2 No. 1 Februari 2024.

Muhibbin Syah. 2013. *Psikologi Pendidikan.* Bandung: Remaja Rosdakarya. Mulyono Abdurrahman. 2018. *Anak Berkesulitan Belajar*. Jakarta: Rineka Cipta.

Najla, Siti. 2016. *Identifikasi Kemampuan Berpikir Kritis Siswa Gaya Belajar Accomodator Menyelesaikan Soal Open Ended Matematika*. Skripsi. Jambi: Program Studi Pendidikan Matematika dan Ilmu Pengetahuan Alam Universitas Jambi.

Najuah, Pristi Suhendro Lukitoyo, W. W. (2020). *Modul Elektronik prosedur penyusunan dan Aplikasinya (Janner Simarmmata (ed.)). Yayasan Kita Menulis.*

Navilla Rachma Nurmalia1 , Christina Kartika Sari. 2023. *Kemampuan Berpikir Kritis dalam Memecahkan Masalah HOTS*. Jurnal Pembelajaran Matematika Inovatif ISSN 2614-221X (print) Volume 6, No. 5, September 2023

Nuurmansyah, H. 2015. *Pengembangan Bahan Ajar Berbasis Ensiklopedia Ilmu Pengetahuan Sosial pada materi Kerajaan Hindu-Buddha dan Islam untuk peningkatan motivasi belajar peserta didik kelas V di Madrasah Ibtidaiyah.*

Okpatrioka,2023. *Research And Development (R&D) Penelitian Yang Inovatif Dalam Pendidikan.* Jurnal Pendidikan, Bahasa dan Budaya Vol.1, No.1 Maret 2023 e-ISSN: 2985-962X; p-ISSN: 2986-0393, Hal 86-100 *Received Januari 27, 2023; Revised Februari 25, 2023; Maret 30, 2023.*

Pasuruan: Lembaga Academic & Research Institute.

Pembinaan, D. 2017. *Panduan Praktis Penyusun e-Modul Pembelajaran*. Jakarta: Kementerian Pendidikan dan kebudayaan.

Pengembangan. Pamekasan: IAIN Madura Press.

Praktisi Pendidikan, Jakarta : Bumi Aksara.

Pratiwi, E. T., & Setyaningtyas, E. W. (2020). *Kemampuan Berpikir Kritis Siswa Melalui Model Pembelajaran Problem Based Learning dan Model Pembelajaran Project Based Learning*. *Jurnal Basicedu*, 4(2). https://doi.org/10.31004/basicedu.v4i2.362

Puspitasari, A. D. 2019. *Penerapan media pembelajaran fisika menggunakan modul cetak dan modul elektronik pada siswa SMA*. Jurnal Pendidikan Fisika, 7(1), 17–25.

Rahayu, J., Solihatin, E., & Rusmono, R. 2019. *Pengembangan Modul Pembelajaran Online Pada Mata Pelajaran Kimia*. Jurnal Ilmiah Wahana Pendidikan, 5(1), 13–28

Rahman Hamid, Abdul dan Muhammad Saleh Madjid. 2014. *Pengantar Ilmu Sejarah.*

Rahmiyati, Meylina dan Fadhlur Rahman. 2022. *Buku Ajar Instrumen Penelitian: Panduan Penelitian di Bidang Pendidikan*. Yogyakarta: Jejak Pustaka.

Ramadani. 2022. *Upaya Meningkatkan Kemampuan Pemecahan Masalah Matematis melalui Pendekatan Realistik Siswa Kelas VIII MTs Pondok Pesantren Saifullah T.A 2021/2022***.** Jurnal BSIS Universitas Pasir Pangairan. Vol. 4 N0. 2 (2022).

Retnowati, E., Fathoni, Y., & Chen, O. (2018). *Mathematics Problem Solving Skill Acquisition: Learning by Problem Posing or by Problem Solving*. *Cakrawala Pendidikan*, 37(1), 1-10

Ropii, M., & Muh.Fahrurrozi. 2017. *Evaluasi Hasil Belajar*. Lombok: Universitas Hamzanwadi Press.

Rusman. 2018. *Model-model Pembelajaran : Mengembangkan Profesionalisme Guru.*

Sapriya. 2012. *Pendidikan IPS Konsep dan Pembelajaran*. Bandung: PT Remaja Rosdakarya.

Saputro, B. 2017. *Manajemen Penelitian Pengembangan*. Yogyakarta: Asswaja Pressindo.

Satria, Rizky dkk,2022. *Panduan Pengembangan Penguatan Profil Pelajar Pancasila. Jakarta: Badan Standara, Kurikulum dan Asesmen Pendidikan*. Jakarta : Kemendikbudristek RI.

Serang: Laksita Indonesia.

Shofiyah, F. (2018). Model *Problem Based Learning* (PBL) dalam Melatih *Scientific Reasoning* Siswa. *Jurnal Penelitian Pendidikan IPA*, 3(1), 33-38

Slameto. 2010. *Belajar dan Faktor-faktor yang Mempengaruhinya*. Jakarta: Rineka Cipta.

Sri Rahayu Ningsih, Indria Kristiawan. 2018. *Kemampuan Berpikir Kritis Siswa Dalam Menyelesaikan Masalah Matematika*. Jurnal CIASTECH Universitas Widyagama Malang.

St Vembrianto dalam Andi Prastowo. 2011. *Panduan Kreatif Membuat Bahan Ajar Inovatif.* Yogyakarta: Diva

Sudaryono. 2013. *Pengembangan Instrumen Penelitian Pendidikan*. Jakarta : Graha Ilmu. Sudjana. 2001. *Metode Statistika*. Bandung: Tarsito.

Sugiyono. 2017. *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R & D)*. Bandung : Alfabeta.

Sugiyono. 2018. *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.

Sugiyono. 2019. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta

Sukiman. 2012. *Pengembangan Media Pembelajaran*. Yogyakarta: Pedagogia. Sumargono, Muhammad Basri, Istiqomah, Aprilia Triaristina. 2022. *Kemampuan Berpikir Kritis Siswa pada Mata Pelajaran Sejarah.* Tarbiyah wa Ta'lim:Jurnal Penelitian Pendidikan dan Pembelajaran. Nov,2022. Vol.9, No. 3

Supratiknya, A. 2012. *Penilaian Hasil Belajar dengan Teknik Nontes*. Yogyakarta: Universitas Sanata Dharma.

Susanto, H. 2014. *Seputar Pembelajaran Sejarah : Isu, Gagasan, dan Strategi Pembelajaran*. Banjarmasin: Aswaja Pressindo.

Sutirman, M. P. (2013). *Media dan model-model Pembelajaran Inovatif*. In Yogyakarta: Graha Ilmu.

T. Amir,2007. *KarakteristikProses Pembelajaran Berbasis Masalah*, Jakarta: Prestasi Pustakarya.

Tegeh, I Made. dkk. 2014. *Model Penelitian Pengembangan*. Singaraja : Yogyakarta Graha Ilmu.

Tricahyono, D. 2022. *Upaya Menguatkan Profil Pelajar Pancasila Melalui Desain Pembelajaran Sejarah Berbasis Kebhinekatunggalikaan*. Jurnal Pendidikan Sejarah Indonesia, *5*(1), 13.

Vera, Y., Maryaningsih, & Agustina, D. 2021. *Pengembangan Modul Berbasis Problem Based Learning pada Mata Kuliah Fisiologi Manusia*. Jurnal Penelitian Pendidikan Social Humaniora, 6(2), 84-89

Wanti Simanjuntak, 2013. *Faktor-faktor Yang Mempengaruhi Prestasi Belajar* Melalui Kompasania Beyond Blogging

Wijayanto, S. M. 2014. *Pengembangan EModul Berbasis Flip Book Maker Vinda Ambita dkk, Pengembangan Bahan Ajar E-Modul dengan Menggunakan Aplikasi dengan Model Project Based Learning untuk Mengembangkan Kemampuan Pemecahan Masalah Matematika*. Prosiding Mathematics and Sciences Forum, 1-4. V

Wiwin Yuliani**,** Nurmauli Banjarnahor**.** 2021. *Metode Penelitian Pengembangan (RND) dalam Bimbingan dan Konseling*. Bandung Vol. 5, No. 3, September 2021 DOI: 10.22460/q.v2i1p21-30.642 DOI: 10.22460/q.v1i1p1-10.497.

Wulandari, Fitriani. 2017. *Profil Berpikir Kritis Siswa dalam Memecahkan Masalah Teorema Pythagoras Ditinjau dari Kemampuan Matematika.* Jurnal ilmiah pendidikan matematika VOLUME 2 NO.06 TAHUN 2017. ISSN:2301-9085

Yogyakarta : Penerbit Ombak.

Yogyakarta: Ombak.

Yolanda Rizkyta Sari dan Evy Nurmiati, "*Analisis Kepuasan Pengguna Google Classroom Menggunakan PIECES Framework (Studi Kasus: Prodi Sistem Informasi UIN Jakarta)*", Jurnal Tekjar, 2021 5(2), Hal. 310

Yuberti. 2015. *Dinamika Teknologi Pendidikan.* Lampung: Pusat Penelitian dan Penerbitan Lembaga Penelitian dan Pengabdian kepada Masyarakat.

Zafri. 2012. *Berpikir Kritis dalam Pembelajaran Sejarah*. Jurnal Diakronika FIS UNP. Zakiah, Linda & Lestari, Ika. 2019. *Berpikir Kritis Dalam Konteks Pembelajaran*. Bogor:

Zubaedi. 2012. *Design Pendidikan Karakter: Konsepsi dan Aplikasinya dalam Lembaga Pendidikan.* Jakarta: Kencana Prenada Media Group.