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Project-Based Learning (PJBL) based on Local History: an Effective Model to Improve Students' Critical and Creative Thinking Skills in History Learning

B. Fitri Rahmawati[1], Suhupawati[2], Zidni[3], Bambang Eka Saputra[4]
[1,2,3,4]Pendidikan Sejarah, Fakultas Ilmu Sosial dan Ekonomi (FISE), Universitas Hamzanwadi

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Abstract
Critical and creative thinking skills are competencies needed in the 21st century. Therefore, a learning model is needed that can improve both competencies, namely the local history-based project-based learning (PjBL) model. The purpose of this study was to determine the effectiveness of the local history-based Project-based Learning (PjBL) model in improving students' critical and creative thinking skills in history learning. This study used a quasi-experimental method with a pretest-posttest control group design. The study was conducted in class X with a sample of 170 people. Data collection used observation using an assessment rubric for students' critical and creative thinking skills, while data analysis used Manova with the help of SPSS 25.0. The results showed that the critical thinking skills of the group that learned using the local history-based PjBL model were better than the group that learned using the conventional model (mean PjBL group = 71; mean conventional group = 60). Likewise, the creative thinking skills of students in the local history-based PjBL group were better than students who learned using the conventional model (mean PjBL group = 81; mean conventional group = 59). This result is reinforced by the results of the Manova test where the F value for Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root is 2466.745 with significance (Sig.) = 0.000 <0.05. Likewise with the Tests of Between-Subjects Effects for critical thinking (F = 1222.236; p <0.001) and creative thinking (F = 4483.554; p <0.001) which means that the integrated PjBL model of Local History is effective in improving students' critical thinking and creative thinking skills both simultaneously and partially.

Corresponding Author:
B. Fitri Rahmawati
Universitas Hamzanwadi
Email: fitrimukti@hamzanwadi.ac.id

1. INTRODUCTION

The challenges of 21st-century education require students to have higher-order thinking skills, including critical and creative thinking skills. These two competencies are the foundation for preparing the younger generation to face the complexity of global problems, rapid technological developments, and social dynamics that demand reflective thinking and innovative solutions [1], [2]. The capacity for critical thinking equips students with the ability to research information, assess the validity of arguments, and formulate rational conclusions [3], while creative thinking directs students to produce original ideas, solve problems innovatively, and create meaningful new products [4]. Critical thinking skills in the context of history include the ability to analyze historical sources, evaluate the validity of information, identify bias, and construct arguments based on evidence. Meanwhile,

creative thinking skills in history learning can be realized in the form of creating alternative narratives, historical drama, historical visual maps, or historical digital media [5].

The importance of these two abilities is also reflected in the Pancasila Student Profile, which is the direction of national education policy in the Independent Curriculum. This profile includes six main dimensions, two of which are critical and creative thinking [6]. The critical thinking dimension refers to students' ability to process information in depth, understand various points of view, and make the right decisions. Meanwhile, the creative dimension emphasizes students' ability to produce original, useful ideas and works that have added value in various contexts. In the context of learning history, this ability is very crucial because history does not merely present a narrative of the past, but also as a means of reflection to understand the present and design a better future [7].

Critical thinking is important to develop in learning so that students are able to face real problems with an analytical and reflective approach [8]. However, in reality, conventional learning practices still dominate history learning in many educational units, as a result students become bored and their learning outcomes are low [9]. Conventional methods tend to make students passive, oriented towards memorization, and less involved in solving real problems and exploring new ideas so that they fail to foster critical thinking and creativity in students. In the 2018 and 2022 PISA reports, the performance of Indonesian students in solving problems that require logical reasoning and innovative solutions is still below the average for OECD countries [10].

As an answer to these problems, the Project Based Learning (PjBL) model is present as an alternative strategic solution. PjBL is a learning model based on in-depth investigation of real problems, through collaborative project design and implementation. This model provides space for students to explore ideas, formulate solutions, and create meaningful products, which ultimately stimulate both their critical thinking skills and creativity [11]. PjBL is characterized by driving questions, in-depth investigations, independent learning, and authentic products. This approach facilitates high-level thinking processes and provides space for students' creative expression [12]. In addition, PjBL is also considered to be in line with the student-centered learning approach and experience-based learning emphasized in the Merdeka Curriculum [6].

In the context of history learning, PjBL will be more meaningful if it is based on local history. Writing local history narratives comes from students' needs and intrinsic demands in the education process. [13]. Students can produce works such as local history exhibitions, documentary videos, or interpretive essays that reflect original and analytical thinking.

The local history-based project learning model has great potential to develop both cognitive and affective dimensions of students. From the cognitive side, students' involvement in the local history investigation process trains them to think chronologically, trace cause and effect, and construct argumentative historical narratives. From the affective side, the connection between history and students' social environment fosters empathy, a sense of ownership of cultural heritage, and a stronger historical awareness (Levstik & Barton, 2015). Therefore, the integration of local history as a project learning context is an important strategy in building connections between learning materials and students' real lives.

Local history is not only a narrative of the past that is limited to factual events, but also a reflection of cultural identity, collective struggles, and social dynamics of society that can provide deep meaning in learning [14]. In the view of [15], local history stimulates thinking through dialogue between macro ideas (national history) and micro ideas (local history). In many cases, these two things can often be in conflict, but at this point critical thinking skills are needed. Therefore, students' learning experiences must provide a forum for the exploration and construction of local narratives.

Local history-based learning models must be able to stimulate students to appreciate the dynamics of history in their surroundings. Some learning models that can be used in local history learning are project-based learning, problem-based learning and deconstructive learning models [16]. Based on this description, this study aims to explain the effectiveness of the Project Based Learning (PjBL) model based on local history to improve students' critical and creative thinking skills.

The introduction should contain (in order) general background, previous literature review (*state of the art*) as the basis for the statement of scientific novelty of the article, the statement of scientific novelty, and the research problem or hypothesis. At the end of the introduction, the purpose of the article's study must be written. In the format of a scientific article, a literature review is not permitted as in a research report, but is realized in the form of a review of previous literature (*state of the art*) to demonstrate the scientific novelty of the article.

2. RESEARCH METHOD

This study used a quasi-experimental method with a pretest-posttest control group design. The sample of the study was 170 high school grade 10 students consisting of 6 classes selected using cluster random sampling techniques. Three classes were designated as experimental groups and three classes as control groups. Students in the experimental group were taught using the project-based learning (PjBL) model, while students in the control group were taught using the conventional model.

Data collection using observation sheets with an instrument in the form of an assessment rubric using a scale of 1-4. The indicators of critical thinking skills used in this study are indicators proposed by [17], namely interpretation (interpreting historical evidence), analysis (building causal relationships from historical events), evaluation (assessing the authenticity and credibility of historical sources), inference (making conclusions based on historical sources), and explanation (compiling historical narratives based on historical sources). Meanwhile, the instrument used to measure students' creative thinking skills is an assessment rubric on 4 indicators offered by [18], namely fluency (fluency of product development ideas), flexibility (flexibility in presenting historical narratives in a more interesting form), originality (product authenticity), and elaboration (product development).

Data analysis using Manova test with SPSS 25.0 to test the effect of treatment groups on two dependent variables simultaneously. Furthermore, univariate (partial) tests were conducted through Tests of Between-Subjects Effects. The assumption test used is the multivariate normality test by looking at the Q-Q plot between the Mahalanobis distance and chi square (qi). If the points on the Q-Q plot tend to form a straight line, then the data is said to be multivariate normal. While the homogeneity test of variance covariance looks at the significance value in Box M, namely homogeneous variance/covariance if the Sig. value is > 0.05 for multivariate and Levene's test for univariate tests. Meanwhile, for the multicollinearity test between dependent variables by looking at the Tolerance and VIF values. There is no multicollinearity between dependent variables if the Tolerance value is > 0.10 and the VIF value is < 10.00 [19].

3. RESEARCH RESULTS AND DISCUSSION

This study aims to determine the effectiveness of the local history-based project-based learning (PjBL) model in improving students' critical and creative thinking skills in history learning. Study Conducted in grade X of high school on the material of History research. In its implementation, students are given the task of conducting a local history research

project. The results of student research are presented in the form of innovative products in the form of posters, videos and research reports.

3.1.Research result

The results of the descriptive analysis of critical thinking skills are presented in the following table:

Table 1. Profile of Students' Critical Thinking Skills

Variables	Group	Mean	Category
Critical thinking	PjBL Model	71	Critical
	Conventional Model	60	Quite critical

Table 1 above illustrates the critical thinking ability aspects of the group that learned using the integrated PjBL model of Local History and the group that learned using the conventional learning model. The PjBL model group got an average score of 71 which is in the critical category, while the conventional model group got a score of 60 which is in the fairly critical category. Thus, it can be seen that the critical thinking ability of the PjBL model group is better than the conventional model group.

Meanwhile, the results of students' creative thinking abilities are presented in the following table:

Table 2. Profile of Students' Creative Thinking Abilities

Variables	Group	Mean	Category
Think creatively	PjBL Model	81	Very creative
	Conventional Model	59	Quite creative

Based on table 2 above, it can be explained that the average score of creative thinking ability of students in the PjBL model group is 81 which is in the very creative category, while in the conventional model group the average score is 59 with a fairly critical category. This means that the creative thinking ability of the PjBL model group is better than the conventional group.

Before conducting the Manova test, the data has been tested for normality, homogeneity and multicollinearity. The multivariate normality test uses Mahalanobis Distance plotted against the quantiles of the Chi-Square distribution (Q-Q plot). The visualization results are shown in the following figure:

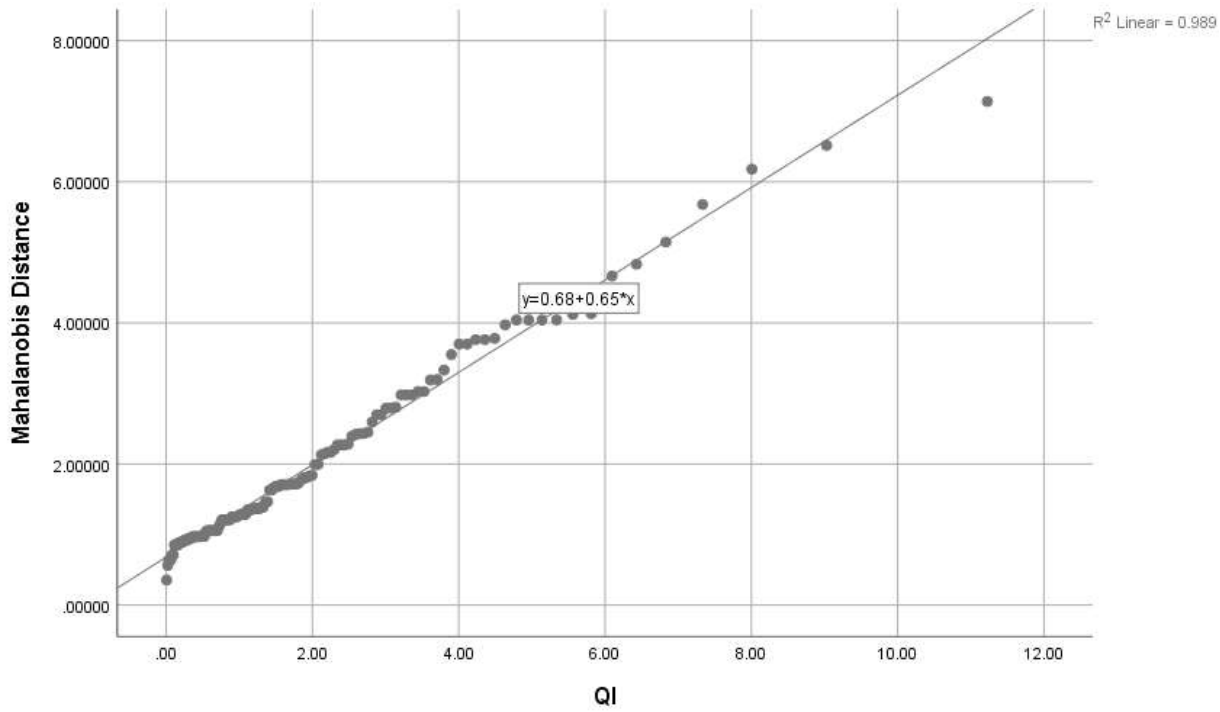

Figure 1. Q-Q Plot of Multivariate Normality

Figure 1 shows that most of the points are very close to the diagonal line, although there is one point that deviates slightly in the upper right tail, the deviation is not statistically significant and is still within the tolerance limit. The coefficient of determination value of the linear model formed is $R^2 = 0.989$, which shows a very high agreement between the empirical Mahalanobis Distance distribution and the theoretical Chi-Square distribution. Based on the criteria of [20], these results indicate that the data meets the assumption of multivariate normality.

The homogeneity test of the covariance matrix was conducted using Box's M Test to test the similarity of the covariance matrix between groups in the multivariate analysis model. The results of the homogeneity test are presented in the following table:

Table 3. Results of the Homogeneity of Variance/Covariance Test

Box's Test of Equality of Covariance Matricesa	
Box's M	2.506
F	.822
df1	3
df2	3497125.897
Say.	.481

Table 3 shows that the Box's M value is 2.506 with a significance value (Sig.) of 0.481. Since the significance value is greater than 0.05 ($p > 0.05$), it can be concluded that there is no significant difference in the covariance matrix between groups.

Meanwhile, the multicollinearity test is carried out by looking at the Tolerance and VIF values presented in the following table:

Table 4. Results of Multicollinearity Testing between Dependent Variables

Model		Collinearity Statistics	
		Tolerance	VIF
	Critical thinking	.106	9.471
	Creative Thinking	.106	9.471

Based on Table 4, the Tolerance value is 0.106 and the VIF is 9.471 for the critical thinking and creative thinking variables. The Tolerance value> 0.10 and VIF <10.00 indicate that there is no multicollinearity between the critical thinking ability variables and students' creative thinking abilities.

The three assumption tests have been met where the data is distributed normally multivariate, the variance/covariance is homogeneous and there is no multicollinearity between dependent variables, then the test with Manova can be continued. The test results are shown in the following table:

Table 5. Simultaneous Test Results

Effect		Value	F	Hypothesis df	Error df	Say.
Group	Pillai's Trace	.974	2466.745	2.000	134.000	.000
	Wilks' Lambda	.026	2466.745	2.000	134.000	.000
	Hotelling's Trace	36.817	2466.745	2.000	134.000	.000
	Roy's Largest Root	36.817	2466.745	2.000	134.000	.000

Based on the table above, the F value for Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root is 2466.745 with significance (Sig.) = 0.000 <0.05, which means that there is a difference in critical thinking skills and creative thinking skills between students who take part in learning with the Local History integrated PjBL model and students who take part in learning with the conventional model. This means that the Local History integrated PjBL model is effective in improving students' critical thinking and creative thinking skills simultaneously.

Furthermore, the influence of integrated PjBL Local History on each variable of critical thinking and creative thinking skills using Tests of Between-Subjects Effects, which are presented in the following table:

Table 6. Partial Test Results

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Say.
Group	Critical thinking	4231.704	1	4231.704	1222.236	.000
	Creative Thinking	15809.409	1	15809.409	4483.554	.000

a. R Squared = .901 (Adjusted R Squared = .900)
b. R Squared = .971 (Adjusted R Squared = .971)

Table 6 shows that the group variable has a significant effect on both dependent variables, namely critical thinking ability and creative thinking ability. For critical thinking ability, the F value is 1222.236 with a significance of p = 0.000 (p <0.05), which means that there is a statistically significant difference between groups in terms of critical thinking ability. The R Squared value of 0.901 indicates that 90.1% of the variation in critical thinking ability can be explained by differences between groups.

Similarly, for creative thinking ability, the F value was obtained as much as 4483.554 with p = 0.000 (p <0.05), which also showed a significant difference between groups. The R Squared value of 0.971 indicated that 97.1% of the variation in creative thinking ability was influenced by group differences. Thus, it can be concluded that the model used significantly explains the differences in critical and creative thinking ability based on the treatment given to each group.

3.2.Discussion

The results of this study indicate that the local history-based project-based learning (PjBL) model given to the experimental group has a significant effect on students' critical thinking and creative thinking skills. This finding is proven through the analysis of Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root manova of 2466.745 with significance (Sig.) = 0.000 <0.05 indicating that the model has a significant effect on both variables simultaneously. This means that the model applied not only affects each ability separately, but also works integratively in shaping students' way of thinking. These results are then reinforced by univariate (partial) analysis which shows that the treatment group has a significant effect on critical thinking ($F = 1222.236$; $p <0.001$) and creative thinking ($F = 4483.554$; $p <0.001$). The results of this study are in line with the study [21] which proves that the project-based learning model can improve students' critical and creative thinking skills. Students with well-developed critical thinking skills take an active role in the educational process and demonstrate higher outcomes [22]. Students with well-developed critical thinking skills are better prepared to collaborate, communicate effectively and solve professional problems in the future.

In the local history-based project model, students collaborate to determine the local history theme to be studied, collect sources, both primary and secondary sources, evaluate the authenticity and credibility of the sources and interpret the sources to produce a historical narrative. According to [23], this learning experience is an ideal platform for developing students' critical thinking skills.

In this model, students also develop an innovative product to present the historical narrative that they have constructed through the process of interpreting historical sources. This can encourage students' creative thinking skills through problem-solving efforts throughout the projects they undertake [24], [25].

The implementation of Project-Based Learning (PjBL) in history learning can provide space for students to determine topics, explore information, collect and compile information results in the form of products which are then presented to get responses and feedback for product improvement [26]. Research [27] shows that local history projects based on digital photovoice have increased students' involvement, participation, activeness, collaboration, autonomy, critical thinking, and digital literacy skills. Field investigations (site visits), interviews with local residents, and a series of meaningful activities (photo taking, editing, and production) make students more active, involved, and show creative results that reflect a more meaningful understanding of history [28].

These findings suggest that effective learning in the current context is not enough to only improve one type of cognitive ability, but must be designed to develop integrative thinking skills. In this context, the success of the experimental group in both aspects suggests that the project-based learning approach has great potential to encourage students to think critically and creatively. Thus, these findings are also in line with the direction of the Pancasila Student Profile policy, which emphasizes the importance of critical and creative reasoning competencies as the main competencies of the 21st century.

The findings in this study provide important contributions to strengthening the theory and development of 21st-century learning practices, especially in the context of developing students' critical and creative thinking skills through structured and contextual learning models. Theoretically, these findings enrich the conceptual framework of the interdependence between critical and creative thinking skills, which

have often been studied separately. This study strengthens the assumption that contextual and integrated pedagogical interventions not only improve the logical-analytical aspect (critical thinking), but also imaginative and solution-oriented expression (creative thinking). Thus, effective learning models in the 21st century should be designed to integrate these two sides of thinking as a synergistic whole. In learning practice, the main contribution of this study lies in the assertion that learning can no longer be limited to mastering content or memorization alone, but must be directed at forming critical and creative ways of thinking.

4. CONCLUSION

Based on the results of the research and discussion above, it can be concluded that the Project-Based Learning (PjBL) model based on local history has proven effective in improving critical and creative thinking skills both simultaneously and separately. Thus, this model can be an alternative for history teachers to improve students' critical and creative thinking skills. The results of this study can be the basis for subsequent studies, especially in the aspect of developing supporting model devices such as teaching materials, media, LKPD and evaluation instruments on other aspects of high-level thinking skills. Development also needs to be done on the model aspect considering that this study is only a limited experiment.

5. BIBLIOGRAPHY

[1] B. Trilling and C. Fadel, 21st century skills: Learning for life in our times. John Wiley & Sons, 2009.

[2] A. R. Saavedra and V. D. Opfer, "Learning 21st-century skills requires 21st-century teaching," Phi Delta Kappan, vol. 94, no. 2, pp. 8–13, 2012, [Online]. Available: http://www.jstor.org/stable/41763587.

[3] P. A. Facione, "Critical thinking: What it is and why it counts," Insight Assess., vol. 2007, no. 1, pp. 1–23, 2011.

[4] E. P. Torrance, Torrance Tests of creative thinking. Directions manual and scoring guide, verbal test booklet B. Scholastic Testing Service, 1974.

[5] T. Hammond and B. Ferster, "Student-created digital historical narratives in the classroom: research designs and methods.," 2009.

[6] Kemendikbudristek, "Dimensi, Elemen, dan Subelemen Profil Pelajar Pancasila pada Kurikulum Merdeka," Kemendikbudristek, pp. 1–37, 2022.

[7] S. Wineburg, Berpikir Historis: Memetakan Masa Depan, Mengajarkan Masa Lalu. Jakarta: Yayasan Obor Indonesia, 2006.

[8] S. M. Brookhart, How to assess higher-order thinking skills in your classroom. Ascd, 2010.

[9] R. A. Pangestuti and J. Afriansyah, "Implementasi Metode Konvensional Pada Pembelajaran Sejarah Kebudayaan Islam di PP. Darunnajah Al-Barokah Bengkulu," JPT J. Pendidik. Temat., pp. 170–176, 2022, [Online]. Available: https://www.siducat.org/index.php/jpt/article/view/654.

[10] OECD, PISA 2018 Assessment and Analytical Framework. Paris: PISA, OECD Publishing, 2019.

[11] S. Bell, "Project-Based Learning for the 21st Century: Skills for the Future," Clear. House A J. Educ. Strateg. Issues Ideas, vol. 83, no. 2, pp. 39–43, 2010, doi: 10.1080/00098650903505415.

[12] J. Larmer, J. R. Mergendoller, and S. Boss, Setting The Standard For Project based learning, no. 1–2. 2015.

[13] N. F. Abidin, "Pembelajaran Sejarah Lokal Di Sekolah Pedesaan Dan Vokasi," J. Pendidik. Sej. Indones., vol. 3, no. 1, p. 88, 2020, doi: 10.17977/um0330v3i1p88-99.
[14] S. Wineburg, "Historical thinking and other unnatural acts," Phi delta kappan, vol. 92, no. 4, pp. 81–94, 2010.
[15] A. Abdullah, Dari Sejarah Lokal Ke Kesadaran Nasional: Beberapa Problematik Metodologis. Yogyakarta: Gadjah Mada University Press, 1987.
[16] H. Joebagio, M. Humin, N. F. Abid, and L. A. Sutimin, "The Development of Deconstructive Learning History Model to Promote the Higher Order Thinking Skill of University Students," New Educ. Rev., vol. 51, pp. 19–29, 2018.
[17] P. a. Facione, "Critical Thinking : What It Is and Why It Counts," Insight Assess., no. ISBN 13: 978-1-891557-07-1., pp. 1–28, 2011, [Online]. Available: https://www.insightassessment.com/CT-Resources/Teaching-For-and-About-Critical-Thinking/Critical-Thinking-What-It-Is-and-Why-It-Counts/Critical-Thinking-What-It-Is-and-Why-It-Counts-PDF.
[18] E. P. Torrance, Torrance Tests of Creative Thinking. Bensenville, IL: Scholastic Testing Service, 1974.
[19] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, Multivariate Data Analysis (Sixth Edition). 2019.
[20] B. G. Tabachnick and L. S. Fidell, Using multivariate statistics , Seventh ed. Boston: Pearson, 2019.
[21] S. Andini and R. Rusmini, "Project-based learning model to promote students critical and creative thinking skills," J. Pijar Mipa, vol. 17, no. 4, pp. 525–532, Jul. 2022, doi: 10.29303/jpm.v17i4.3717.
[22] H. A. Butler et al., "The Halpern Critical Thinking Assessment and real-world outcomes: Cross-national applications," Think. Ski. Creat., vol. 7, no. 2, pp. 112–121, 2012, doi: 10.1016/j.tsc.2012.04.001.
[23] O. V Parakhina and M. A. Mirzoeva, "Developing Students' Critical Thinking Skills Through Project Based Learning: International Experience," Vestn. IKBFU Philol. Pedagog. Psychol., 2023, doi: 10.5922/pikbfu-2023-4-10.
[24] N. Rehman, X. Huang, A. Mahmood, M. A. M. AlGerafi, and S. Javed, "Project-based learning as a catalyst for 21st-Century skills and student engagement in the math classroom," Heliyon, vol. 10, no. 23, Dec. 2024, doi: 10.1016/j.heliyon.2024.e39988.
[25] D. Sulisworo, Konsep Pembelajaran Project Based Learning. Alprin, 2020.
[26] Faidin, Suharti, Subhan, Fajrun, and Buhari, "Increasing Students ' Critical and Creative Thinking Skills using the Hybrid-PjBL Learning Model in Bima Local Wisdom-Based History Learning," IJECA Int. J. Educ. Curric. Appl., vol. 7, no. 3, pp. 438–449, 2024, doi: https://doi.org/10.31764/ijeca.v7i3.26871.
[27] J. Jamiludin and D. Darnawati, "Project-Based Digital Photovoice: Teaching Local History through the Visual Method," HSE Soc. Educ. Hist., vol. 11, no. 3, pp. 245–274, 2022, doi: 10.17583/hse.10444.
[28] D. Kokotsaki, V. Menzies, and A. Wiggins, "Project-based learning: A review of the literature," Improv. Sch., vol. 19, no. 3, pp. 267–277, Jul. 2016, doi: 10.1177/1365480216659733.