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The Effect Of The Inquiry Based Learning Model In Improving The Activities Of Grade XI Students In History Learning At SMA Negeri 2 Tenggarong Seberang

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Abstract

This study aims to find out history learning at SMA Negeri 2 Tenggarong Seberang and measure the influence of the application of *the Inquiry Based Learning model* on the learning activities of grade XI students. The research uses a quantitative approach with a quasi-experimental design in the form of *Pretest-Posttest Control Group Design*. The research sample was taken by *simple random sampling*, namely class XI A2 as the experimental class and class XI A1 as the control class (33 students each). Data was collected through observation of student activities, Likert scale questionnaires, and pretest-posttests. The results showed that the activity of students in the experimental class reached 78.75% (Good category), higher than the control class of 66.25% (Adequate category). The validity test of the questionnaire produced 27 valid items with *a reliability of Cronbach's Alpha* of 0.918. *The Independent Sample t-test* in the posttest obtained a significance value of 0.027 (< 0.05), so that an alternative hypothesis was accepted. Based on these results, it can be concluded that the *Inquiry Based Learning learning model* has a significant effect on improving the learning activities of grade XI students in History learning at SMA Negeri 2 Tenggarong Seberang. This model is able to create more active, interactive, and compliant learning with the Independent Curriculum.

Keywords: **Inquiry Based Learning (IBL), student learning activities, history learning, SMA Negeri 2 Tenggarong Seberang.**

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INTRODUCTION

SMA Negeri 2 Tenggarong Seberang has implemented the Independent Curriculum, but student learning activities in History subjects are still low. This indicates a discrepancy between the learning methods applied, such as lectures and the assignment of memorization assignments, and students' learning preferences. Monotonous and less interactive learning methods cause students to tend to be passive, rarely ask questions, participate minimally in discussions, and easily lose focus during the learning process.

History learning should be an important means in shaping historical awareness, national identity, and students' critical thinking skills. However, in the field, History learning at SMA Negeri 2 Tenggarong Seberang is still dominated by conventional approaches. Based on initial observations, grade XI students received more material passively without active involvement. Teachers rarely use varied learning models or media, so the classroom atmosphere is less dynamic. This condition causes students' understanding of History material to be less in-depth and learning outcomes that are not optimal. The low learning activity of students is also influenced by several factors, including the heterogeneity of students' abilities, limited access to digital learning resources, and the limited number of History teachers. As a result, students find it difficult to connect history material with daily life and are less motivated to follow learning.

In overcoming these problems, innovative and student-centered learning model innovation is needed. One of the models that is considered effective is ***the Inquiry Based Learning (IBL)*** or Inquiry-Based Learning Model. This model encourages students to be actively involved in the learning process through systematic stages, namely problem orientation, question formulation, hypothesis development, data collection, analysis, hypothesis testing, and conclusion drawn. This approach not only enhances students' learning activities, but also develops critical thinking skills, creativity, and cooperation that are in line with the spirit of the Independent Curriculum.

Various previous studies have shown the success of the application of the Inquiry Based Learning model in improving the quality of History learning. However, research that specifically examines its effect on student learning activities in high school, especially in the East Kalimantan region, is still limited. Therefore, this research is important to do. This study aims to find out the overview of History learning at SMA Negeri 2 Tenggarong Seberang and measure the influence of the application of *the Inquiry Based Learning model* on the learning activities of grade XI students. It is hoped that the results of this research can provide alternative learning strategies that are more effective and in accordance with the demands of the current curriculum.

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RESEARCH METHODS

In this study, the author uses quantitative research methods. Quantitative research is a scientific method that uses numerical data to test hypotheses, measure variables, and generalize research findings to a wider population. The type of research used is a *quasi-experiment.* The research design chosen was *Pretest-Posttest Control Group Design*. This design was used to determine the effect of the application of the Inquiry Based Learning learning model on student learning activities by comparing the results between the experimental class and the control class.

The population in this study is all grade XI students of SMA Negeri 2 Tenggarong Seberang for the 2025/2026 school year. The research sample was taken by *simple random sampling*, namely class XI A2 as the experimental class and class XI A1 as the control class. Each class consisted of 33 students, so the total research sample was 66 students. The independent variable in this study is the Inquiry Based Learning learning model, while the dependent variable is the learning activities of grade XI students in History learning. Sample selection was carried out randomly with the aim that both classes had relatively similar characteristics before being given treatment.

Data was collected through observation of student activities, distribution of Likert scale questionnaires, as well as pretest and posttest. The questionnaire used has been tested for validity and reliability, resulting in 27 valid items with *a Cronbach's Alpha value* of 0.918. Data analysis was carried out with the help of the SPSS program which included normality tests, homogeneity tests, and hypothesis tests using Independent Sample t-test at a significance level of 0.05.

RESULTS AND DISCUSSION

Research Results

Observation Results

The implementation of the research was carried out on grade XI students of SMA Negeri 2 Tenggarong Seberang with the material of the Proclamation of Indonesian Independence. The results of the observation of student learning activities showed a marked difference between the experimental class and the control class.

Table 1. Results of Student Activity Observation

Classes	Percentage	Category
Eksperimen (XI A2)	78,75%	Good
Controls (XI A1)	66,25%	Enough

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Based on the results of observation of student activities during the learning process, the experimental class (XI A2) obtained an average activity percentage of 78.75% which is included in the Good category. Meanwhile, the control class (XI A1) only reached an average of 66.25% in the Adequate category. This difference of 12.5% shows that students in the experimental class are more active in participating in learning, both in terms of verbal participation, attention, discussion, and emotional involvement.

Instrument Test Results

Validity Test

The validity test is used to find out the extent to which the research instrument is able to measure what should be measured. The instrument is said to be valid if the value of r is calculated > r of the table at a significance level of 0.05. The Validity Test in this study was carried out using *Pearson's Product Moment correlation* with the help of the SPSS program. In this study, there is a questionnaire consisting of 29 statements that will be tested for validity. Based on the results of the calculation, the questionnaire items were obtained as follows.

Table 2. Questionnaire Validity Test

Item	r count	R table	Conclusion		Item	r count	R table	Conclusion
V1	.381**	0.344	Valid		V16	.732**	0.344	Valid
V2	.305	0.344	Invalid		V17	.438**	0.344	Valid
V3	.398**	0.344	Valid		V18	.582**	0.344	Valid
V4	.344**	0.344	Valid		V19	.056	0.344	Invalid
V5	.548**	0.344	Valid		V20	.525**	0.344	Valid
V6	.639**	0.344	Valid		V21	.660**	0.344	Valid
V7	.691**	0.344	Valid		V22	.646**	0.344	Valid
V8	.739**	0.344	Valid		V23	.617**	0.344	Valid
V9	.559**	0.344	Valid		V24	.346**	0.344	Valid
V10	.356**	0.344	Valid		V25	.752**	0.344	Valid
V11	.598**	0.344	Valid		V26	.542**	0.344	Valid
V12	.454**	0.344	Valid		V27	.703**	0.344	Valid
V13	.560**	0.344	Valid		V28	.680**	0.344	Valid
V14	.606**	0.344	Valid		V29	.772**	0.344	Valid

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Based on the results of the validity test of the research instruments presented in the table above, it can be seen that of the 29 statements tested, there were 27 statements that were declared valid and 2 statements that were declared invalid. The statement items that are declared invalid will be discarded or not used in the collection of further research data. Meanwhile, 27 valid statements will be used as research instruments to measure student activities.

Reliability Test

The reliability test is a test used to determine the level of consistency of research instruments. Instruments are declared reliable when used repeatedly to measure the same object will produce consistent data. In this study, *the reliability test* was used to determine whether student activity questionnaires were suitable for use as a data collection tool. The formula used is *Cronbach'Alpha* through SPSS. This method is used because the research instrument is in the form of a Likert scale questionnaire. The instrument is declared reliable if *Cronbach's Alpha value* is more than 0.60.

Based on the results of the calculation of the reliability of the questionnaire instrument, the following results were obtained:

Table 3. Questionnaire Reliability Test

Reliability Statistics	
Cronbach's Alpha	*N of Items*
.918	29

Based on the results of the instrument reliability test presented in the *Reliability Statistics* table, *Cronbach's Alpha* value was obtained at 0.918 with a total of 29 item statements. *The value of Cronbach's Alpha* is greater than 0.060, so it can be concluded that the research instrument has a high level of reliability. Thus, the student activity questionnaire instrument was declared reliable and suitable for use as a data collection tool in research.

Test Analysis Requirements

Before data analysis, the researcher conducts a requirements test to ensure that the data obtained meets statistical assumptions. This test is important so that the results of the analysis can be interpreted validly. The analysis prerequisite tests that will be carried out include normality tests, homogeneity tests on pretest-postest results in the experimental class and the

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control class. The following are the prerequisite tests of the analysis that are applied:

Normality Test

The Normality Test aims to find out whether the data obtained is normal or not. This test was performed using *Shapiro-Wilk* with the help of a data processing application. The decision on the normality test is that if the significance value (Sig. > 0.05), then the data is declared to be normally distributed. The results of the normality test that have been obtained are as follows:

Table 4. Normality Test of Experimental Class and Control Class

Classes	Your	Say.	Normal Test Criteria	Verdict
Eksperimen	Pretest	0,074	0,05	Normal
	Posttest	0,101	0,05	Normal
Control	Pretest	0,082	0,05	Normal
	Posttest	0,199	0,05	Normal

Based on the table above, it is known that the results of the Shapiro-Wilk Normality test in the experimental class pretest have a test value of 0.074 > 0.05 and the posttest in the experimental class has a test of 0.101 > 0.05. The pretest of the control class has a test value of 0.082 > 0.05 and the posttest of the control class has a test value of 0.199 > 0.05. Based on the above explanation, it can be concluded that the pretest and posttest data in the experimental class and the control class are distributed normally.

Homogeneity Test

The homogeneity test is carried out to find out whether the variance of two or more groups has similarities (homogeneous) or not. The homogeneity test requirement is that if the Sig. value > 0.05, then the data is declared homogeneous. The results of the homogeneity test obtained are as follows:

Table 5. Homogeneity Test of Student Activities

Your	*Levene Statistic*	*df1*	*df2*	*Say.*
Pretest	3.648	1	64	0,061
Posttest	0,695	1	64	0,408

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Based on the table above, it is known that the homogeneity test using the l*evene's test* showed a significance value of the pretest of 0.061 > 0.05 and the posttest of 0.408 > 0.05. Therefore, it can be concluded that the variance of the two groups is homogeneous.

Uji Hypothesis

Hypothesis tests are carried out to find out whether or not there is an influence or difference between the variables studied. In this study, the hypothesis test was carried out using statistical tests that are in accordance with the type and characteristics of the data with the help of a data processing application. The condition for the hypothesis test is that if the Sig. value < 0.05, then the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected, which means that there is a significant influence or difference. The results of the hypothesis test obtained are as follows:

Table 6. Student Activity Hypothesis Test

Your	t	df	*Sig. (2-tailed)*	*Mean Difference*
Pretest	-2.144	64	0,036	-5.606
Posttest	-2.260	64	0,027	-4.848

Based on the table above, it is known that the results *of the Independent Sample T-Test* in the pretest show a calculated t-value of -2,144 with a significance value (p-value) of 0.036 and in the posttest shows a calculated t-value of -2,260 with a significance value (p-value) of 0.027. Since the significance values are smaller than 0.05 (0.001 < 0.05) and (0.000 < 0.05), the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. Therefore, it can be concluded that there is a significant influence on the application of *the Inquiry Based Learning* learning model on the improvement of learning activities of grade XI students in learning History at SMA Negeri 2 Tenggarong Seberang.

DISCUSSION

History Learning at SMA Negeri 2 Tenggarong Seberang

History learning at SMA Negeri 2 Tenggarong Seberang before the implementation of *the Inquiry Based Learning model* was still dominated by a conventional teacher-centered approach. Lecture methods, memorization assignments, and limited discussions are the main choices, so students tend to be in a passive position as recipients of information. The results of observations in the control class showed that student learning activities only reached 66.25% (Sufficient

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category), with the dominance of visual activities (paying attention to the teacher's explanations) and *writing activities* (recording material), while oral, mental, and emotional activities were still low. Students rarely ask questions, participate in in-depth discussions, and tend to lose focus during the learning process.

This situation is in line with the general challenge of learning history which is often considered monotonous and less relevant to students' lives. The chronological memorization approach without context analysis causes low student involvement, whereas the Independent Curriculum requires active, student-centered, and oriented learning to develop critical thinking skills and collaboration.

After the application of *the Inquiry Based Learning model* in the experimental class, there was a significant change in the dynamics of learning. Students are directly involved in all stages of inquiry, starting from problem orientation, question formulation, data collection, analysis of historical evidence, to conclusion. The results of observations showed an increase in student learning activities to 78.75% (Good category). Students are more active in asking questions, discussing in groups, analyzing material, and expressing opinions with confidence. The questionnaire response also reinforced these findings, where students in the experimental class gave a more positive assessment of the learning process than the control class.

This finding confirms that conventional history learning at SMA Negeri 2 Tenggarong Seberang is not optimal in encouraging student involvement. Meanwhile, the *Inquiry Based Learning* model is able to create a more dynamic, interactive, and in accordance with the principles of the Independent Curriculum. Learning is not just the presentation of facts, but the process of discovering meaningful knowledge, so that students can connect historical events with contemporary issues.

The Effect of the Application of the Inquiry Based Learning Model on the Learning Activities of Grade XI Students in History Learning at SMA Negeri 2 Tenggarong Seberang

The application of *the Inquiry Based Learning* (IBL) model has proven to have a significant effect in improving the learning activities of grade XI students in History subjects at SMA Negeri 2 Tenggarong Seberang. Based on the results of observations, the activity of students in the experimental class reached 78.75%, higher than the control class which was only 66.25%. This increase can be seen in all six indicators of learning activities (*visual, oral, listening, writing, mental, and emotional*). Students in the experimental class are more active in paying attention to the material, asking questions, discussing, recording findings, analyzing historical problems, and showing greater enthusiasm during the learning process.

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The results of the student activity questionnaire further strengthened these findings. In the experimental class, the percentage of Strongly Agree answers reached 40.31% (compared to 35.02% in the control class), while the percentage of negative answers (Disagree and Strongly Disagree) was much lower. This shows that students find learning to be more engaging, interactive, and provide a wider space for them to actively participate.

In terms of statistics, the *Independent Sample t-test* on the posttest produced a significance value of 0.027 (< 0.05). Thus, the zero hypothesis is rejected and an alternative hypothesis is accepted, which means that there is a significant influence of the application of the Inquiry Based Learning model on the improvement of students' learning activities. The average difference in activity between the experimental and control classes showed a marked difference, both descriptively and inferentially.

This positive influence occurs because the IBL model places students as active subjects in the investigation process. Through systematic stages (orientation, problem formulation, hypothesis, data collection, testing, and conclusion), students are no longer passive, but rather small researchers who construct their own knowledge. This approach is in line with the theory of learning activities that emphasizes the importance of students' physical, mental, and emotional involvement in achieving meaningful learning.

Overall, this study proves that the *Inquiry Based Learning model* is not only effective in improving student learning activities, but also supports the implementation of the Independent Curriculum at the school level. This model can be an alternative innovative learning strategy for history teachers, especially in schools with similar characteristics.

CONCLUSION

Based on the results of the research and discussion on the influence of the application of *the Inquiry Based Learning* model on the learning activities of grade XI students in history learning at SMA Negeri 2 Tenggarong Seberang, it can be concluded that the application *of the Inquiry Based Learning* model in history learning in grade XI of SMA Negeri 2 Tenggarong Seberang can be carried out well according to the stages of the inquiry learning model, namely orientation, problem formulation, hypothesis, data collection, hypothesis testing, and drawing conclusions. Through these stages, the learning process takes place more actively and interactively because students are directly involved in questioning, discussing, seeking information, analyzing problems, and concluding learning outcomes.

Based on the results of observations of student learning activities, the application of *the Inquiry Based Learning* model showed an increase in student learning activities in the aspects

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of visual activities, oral activities, listening activities, writing activities, mental activities, and emotional activities. This shows that the Inquiry Based Learning model is able to create historical learning that encourages active student involvement during the learning process.

Based on the results of hypothesis testing through *the Independent Sample t-test*, a significance value (Sig. 2-tailed) was obtained of 0.050. This value shows that there is an effect of the application of the *Inquiry Based Learning model* on the learning activities of grade XI students in history learning at SMA Negeri 2 Tenggarong Seberang, so that the alternative hypothesis (Ha) is accepted and the null hypothesis (H_o) is rejected. These results show that the application of the Inquiry Based Learning model has a significant influence on the improvement of student learning activities.

This influence is also strengthened by the difference in the average posttest results between the control class and the experimental class. The control class obtained an average score of 71.97, while the experimental class obtained an average score of 76.82. The average difference of 4.85 points showed that the learning activities of students in the experimental class were higher than those in the control class. These differences in results show that the application *of the Inquiry Based Learning* model is more effective in improving student learning activities than conventional learning.

Thus, based on the overall results of the study, it can be concluded that the application of the Inquiry Based Learning model has a positive effect on the learning activities of grade XI students in history learning at SMA Negeri 2 Tenggarong Seberang. This model has been proven to increase student activeness, participation, and involvement in the learning process, as well as provide better learning activity results in the experimental class than the control class.

REFERENCES

Abubakar, R. (2021). RESEARCH METHODOLOGY (1st ed.). SUKA Press UIN Sunan Kalijaga.

Abdullah, K., Jannah, M., Aiman, U., Hasda, S., Fadilla, Z., Taqwin, Masita, Ardiawan, K. N., & Sari, M. E. (2022). Quantitative Research Methodology. In Muhammad Zaini Publishing Foundation.

Ali, Moh., & Julaihah, U. (2023). IMPLEMENTATION OF CONTEXTUAL TEACHING & LEARNING LEARNING MODEL TO INCREASE STUDENTS' ACTIVENESS AND CRITICAL THINKING. Social Dynamics: Journal of Social Science Education, 2(3), 263–277. https://doi.org/10.18860/dsjpips.v2i3.4083

Ariandi, Y. (2016). ANALYSIS OF PROBLEM-SOLVING SKILLS BASED ON LEARNING ACTIVITIES IN THE PBL LEARNING MODEL. PRISMA: Proceedings of the National Seminar.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Dwi Wijayanti, R., Fajriyah, I., Faris Abdil Aziz, M., & Priyanto Widodo, J. (2024). INQUIRY LEARNING ON HISTORY MATERIALS TO IMPROVE CRITICAL THINKING OF GRADE XI STUDENTS Inquiry Learning on History Materials to Improve Critical Thinking of Grade XI Students. Education and Humanities, 8(2), 12754–12760. https://doi.org/10.36526/js.v3i2.4126

Haris, F. (2024). Analysis of the Application of the Inquiry Learning Approach in Improving Critical Thinking Skills in History Subjects. INNOVATIVE: Journal Of Social Science Research, 4(3), 7832–7842. https://j-innovation.org/index.php/innovative

Eryani, A., & Belajar, H. (2024). Application of the Inquiry Based Learning Model in Improving the Learning Outcomes of History in Class XII Social Studies at SMA Negeri 1 Pangean. JIIP (Scientific Journal of Educational Sciences), 7(12), 13624–13628. http://Jiip.stkipyapisdompu.ac.id

Fadilla, Z., Ketut Ngurah Ardiawan, M., Eka Sari Karimuddin Abdullah, M., Jannah Ummul Aiman, M., & Hasda, S. (2022). QUANTITATIVE RESEARCH METHODOLOGY (Nanda Saputra, Ed.). Muhammad Zaini Publishing Foundation. http://penerbitzaini.com

Festiawan, R. (2020). Learning and Learning Approaches. academia.edu, 1–17. https://doi.org/https://doi.org/10.17605/OSF.IO/26VRK

Martha, Y., Sa, D., Maulana, H., & Warto, W. (2023). Basic Concepts of History: Its Implementation in Learning. BERSATU: Journal of Bhinneka Tunggal Ika Education, 1(4), 164–176. https://doi.org/10.51903/bersatu.v1i4.285

Ningrum, S. D., Agung, A. I., Buditjahjanto, I. G. P. A., & Anifah, L. (2025). Forming Historical Understanding Through an Inquiry Approach to the Materials of the Independence Struggle. PARAMETERS: Journal of Education, State University of Jakarta, 37(2), 97–117. https://doi.org/10.21009/parameter.372.02

Ramdani, N. G., Fauziyyah, N., Fuadah, R., Rudiyono, S., Septiyaningrum, Y. A., Salamatussa'adah, N., & Hayani, A. (2023). Definitions and theories of approaches, strategies, and learning methods. Indonesian Journal of Elementary Education and Teaching Innovation, 2(1), 20. https://doi.org/10.21927/ijeeti.2023.2(1).20-31

Rinawati, Desy, and Eka Kurnia Darisman. 2020. "Survey of the Saturation Level of Vocational School Students Learning at Home in Creative Products and Entrepreneurship Subjects During the Covid-19 Pandemic." Journal of Science and Education (JSE) 1(1):32–40. doi:10.56003/jse.v1i1.11.

Richard I. Arends. (2012). Learning To Teach (9th ed., pp. 358–394). McGraw-Hill.

Saputri, Marina, Agus Muliadi, and Safnowandi Safnowandi. 2022. "Student Learning Interest

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Profile with the Problem Based Learning (PBL) Learning Model in Class XI." Educatoria : Scientific Journal of Education 2(3):148–55. doi:10.36312/ejiip.v2i3.98.

Suriani, N., Risnita, & Jailani, M. S. (2023). The Concept of Population and Sampling and Participant Selection Reviewed from Educational Scientific Research. Journal of IHSAN: Journal of Islamic Education, 1(2), 24–36.

Sidik, F., Riadi, R., & Gimin. (2024). The Effect of the Flipbook-Based Inquisition Learning Model on Student Learning Activities. JIIP (Scientific Journal of Educational Sciences), 7(7), 6702–6708. http://Jiip.stkipyapisdompu.ac.id

Tabrani, and Muhammad Amin. (2023). Cooperative Learning Model. Journal of Education and Counseling, 5(2), 200–2013.

Veronica, A., Ernawati, et al. (2022). QUANTITATIVE RESEARCH METHODOLOGY (1st ed.). PT. GLOBAL TECHNOLOGY EXECUTIVE.

Yani Balaka, M., & Abyan, F. (2022). QUANTITATIVE RESEARCH METHODOLOGY (Iskandar. Ahmaddien, Ed.; 1st ed.). WIDINA BHAKTI PERSADA BANDUNG. www.penerbitwidina.com

Zulfikar, R., Permata Sari, F., Fatmayati, A., Wandini, K., Haryati, T., Jumini, S., Annisa, S., Budi Kusumawardhani, O., Mutiah, atul, Indrakusuma Linggi, A., & Fadilah, H. (2024). QUANTITATIVE RESEARCH METHODS (THEORY, METHODS AND PRACTICES) (E. Damayanti, Ed.; 1st ed.). MAJOR MEDIA OUTLETS. www.freepik.com

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