



Development of a research-based learning model to enhance historical thinking skills

A. FIKRI, SUARMAN, ISJONI, SUMARNO

ABSTRACT

Introduction. Historical thinking skills are crucial for students to analyze and synthesize historical events critically, enabling them to engage with broader societal challenges. However, these skills remain underdeveloped in many higher education institutions, due to the use of inadequate teaching models. Recognizing the universal importance of fostering historical thinking in shaping critical global citizens, this study aims to develop a research-based learning model applicable across diverse educational contexts.

Research methods. This study employed the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) and involved 120 students from the History Education Department at the University of Riau, spanning semesters 3 through 11. Participants were selected using purposive stratified sampling, ensuring diversity in academic backgrounds and research experience. Data were collected via observations, questionnaires, and interviews. The model was validated by six experts and tested using t-tests to evaluate its effectiveness in improving historical thinking skills.

Results. The research-based learning model fundamentally integrates historical inquiry and direct research activities into the teaching process, encouraging students to actively engage with primary sources, analyze historical contexts, and synthesize findings into coherent narratives. This approach cultivates a deeper understanding of history through critical and analytical thinking. The implementation of the model demonstrated significant improvements in students' historical thinking skills. The experimental group's pre-test average score of 67.31 increased to 82.17 in the post-test. Statistical analysis using an independent samples t-test showed a t-value of 18.933, exceeding the critical t-value (1.658), with a significance level of 0.000 (<0.05). These findings confirm the model's strong and statistically significant impact on enhancing students' ability to critically engage with and interpret historical materials.

Conclusion. The research-based learning model is a valid, reliable, and practical approach to enhancing historical thinking skills. It provides opportunities for students to engage in real-life historical research, improving their analytical, critical thinking, and synthesis abilities. The model also contributes to curriculum development in history education, promoting both local and global historical understanding. Further research is recommended to broaden its application.

KEYWORDS

historical learning, historical thinking, research-based learning model

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INTRODUCTION

History education plays a crucial role in shaping students' knowledge and skills, not only to memorize historical facts but also to develop critical thinking and analytical abilities essential for understanding complex global issues. International organizations such as UNESCO, the Council of Europe, and the International Association of Universities (IAU) emphasize the importance of critical thinking and historical literacy as essential competencies for global citizenship and active participation in a democratic society. UNESCO promotes education that fosters critical thinking and historical understanding through literacy initiatives and human rights campaigns, while the Council of Europe stresses the importance of teaching history and intercultural dialogue to promote democracy and tolerance. The IAU supports the development of critical thinking skills through the internationalization of higher education, particularly through initiatives involving students from developing regions. These initiatives recognize history education as a means of fostering a deeper understanding of past events, which can only be interpreted through the careful analysis of historical evidence [1; 2]. This process requires a scientific method and activation of high order thinking skills [3; 4]. Improving the quality of history education is crucial to ensure the critical understanding of history that shapes the future careers of students [5; 8].

Historical thinking skills are a key objective of history education, encompassing analytical, critical, creative, innovative, deductive, inductive, scientific, lateral, rational, and systemic thinking [9; 10]. Historical thinking utilizes procedural knowledge and historical inquiry to understand past events. These skills enable an active and self-reflective process dealing with the intentions behind historical narratives and interpretations of the past based on historical sources [11; 12]. The key processes in historical thinking are deconstruction and reconstruction, in which learners compare information, describe continuity, and change, and explain historical events [13; 14].

The importance of history education and students' historical thinking skills goes beyond memorizing historical facts; it extends to students' abilities to analyze, synthesize, and interpret historical information [15]. Moreover, students with strong historical thinking skills are considered proficient critical thinkers [16; 17], and critical thinking is a crucial characteristic of competent global citizens [18]. As an integral part of the curriculum, history education aims to equip students with a holistic understanding of past events, enabling them to grasp the values, conflicts, and developments that shape the present world [19]. In the development of historical thinking skills, activities should be designed not only to engage students actively but also to focus on using various methods and different learning strategies [20].

Despite the significant contribution of history education and the need for historical thinking skills, the history education program at the University of Riau faces critical issues in the learning process. The evaluation of history education lecturers' performance indicates that the performance of history education lecturers is assessed as moderate (40.73%), far below other programs in the faculty that received good evaluations. One critical aspect is the management of teaching, with an achievement of only 22.53%, due to the mismatch between teaching methods and semester learning plans.

Initial interviews with the teaching team at the history education department of the University of Riau revealed that students' historical thinking skills and their involvement in the learning process were still low. This is reflected in students' lower achievements in developing critical reading skills for historical sources, identifying perspectives, and generalizing based on historical evidence. Additionally, the ability to understand historical context and assess the comprehensive impact of events is still weak. Initial investigations revealed that one of the causes of the low historical thinking skills among history education students at the University of Riau is the use of inappropriate learning models in enhancing historical thinking skills.

The teaching models used by lecturers in history education at the University of Riau include cooperative learning and discovery learning models. Although the cooperative learning model is recognized as an approach that enhances interaction among students in the classroom and promotes collaborative learning, this model has limitations in improving historical thinking skills. It primarily focuses on developing social and collaborative skills, overlooking in-depth historical analysis [21; 24]. Unequal levels of participation and contributions among group members can lead to a lack of understanding of the material among some students, including historical thinking skills [25]. Therefore, a more balanced approach that integrates cooperative learning elements with learning

strategies focused on individual development of historical thinking skills is needed to achieve optimal learning outcomes.

On the other hand, the discovery learning model, although stimulating curiosity and active student participation, has limitations in enhancing historical thinking skills. This model tends to focus on exploration without adequate guidance, making it difficult for students to recognize and interpret relevant historical contexts. The lack of structural guidance can result in shallow understanding or even misinterpretation of historical sources. Without proper direction, students may not fully develop the analysis and synthesis skills required to understand the historical implications of specific events or themes.

Based on the outlined issues, there is a need for a more appropriate and effective learning model to enhance historical thinking skills in history education. One alternative learning model that can be used to achieve these goals and address various issues is the research-based learning model, especially in higher education. Research-based learning is designed around research activities that encourage students to engage in real-life research by conducting their own experiments [26]. Griffiths explains that the main activity in the research-based learning model is students conducting inquiry-based learning [27]. This can significantly enhance learning productivity when transformed into courses, such as local history. Wessels state that research-based learning is an effective and active learning format [28; 29].

When students are introduced to courses with a research-based learning model focused on research activities, they acquire the necessary skills to conduct independent research, as it equips them with complex skills [30; 31]. Research-based learning is a learning model that integrates research into the learning process, such as analyzing, synthesizing, and evaluating, allowing participants and lecturers to enhance their understanding and application of knowledge [32; 33]. Fakhriyah state that research-based learning is an effective way to transform learning by training students on how to learn through guided constructivist philosophy [34]. Ahel and Schirmer explain that the implementation of research-based learning can be done through role-playing, simulation, and teamwork [35].

Student involvement in research leads to positive responses to research [36]. Astiana & Sota research reveals that research-based learning has an impact on knowledge and thinking skills, ethics, independent inquiry, and social aspects [37; 38]. Meanwhile, the research-based learning enhances creative thinking skills. Research-based learning, as described by Lookwood and Gooley [39; 40], summarizes a model that involves the development of hypotheses, data collection and evaluation, drawing conclusions, and presenting reports.

In an effort to build higher-order thinking skills, such as critical analytical thinking, rational thinking, and historical thinking, research-based learning shows significant advantages [41]. The processes involved in historical inquiry and research are highly effective in encouraging the activation and development of various aspects of historical thinking skills. Therefore, the research-based learning model becomes a useful tool for promoting the development of historical thinking skills in history education.

Some previous studies have made important contributions to finding solutions to enhance historical thinking skills. For example, Abbas developed a history education model based on transcripts with the aim of improving historical thinking skills [42]. This study shows that the approach can be effective in enhancing students' understanding of historical contexts. Additionally, Ofianto & Ningsih applied a problem-based learning approach to improve students' historical thinking skills [43]. Although the problems faced were not directly related to historical issues, this model proves effective in stimulating students' critical thinking.

Conversely, research by Affandi & Sukyadi and Chang shows that it is more impactful if students are involved in field research to construct historical narratives [44; 45]. This emphasizes the importance of direct experience in developing historical thinking skills. Goulding research focused on an internet-based learning model aimed at improving historical thinking skills [46]. The results show that the integration of technology, especially the internet, can be an effective means of stimulating students' historical thinking.

Based on the findings of previous studies, it is revealed that the proposed learning models to enhance historical thinking skills still face some weaknesses. Therefore, to overcome challenges and

limitations found in previous studies, this research aims to develop a research-based learning model. This study has a significant goal: to create a research-based learning model that is not only valid and reliable but also practical for improving historical thinking skills among history education students at the University of Riau.

By implementing the research findings, it is expected that the positive impact will be felt by students, contributing positively to the enhancement of more contextual and constructive history education. The model is anticipated to develop students' historical thinking skills, stimulate critical analysis, and make a meaningful contribution to shaping students' critical thinking patterns.

METHOD AND PROCEDURES

Participant

This research was conducted in the Department of History Education at the University of Riau, focusing on students enrolled in semesters 3 through 11. The study population included 357 students. Purposive stratified sampling was employed to select samples, taking 20 students from each class, resulting in a total of 120 students. Subject selection was based on various considerations, ensuring diversity in academic backgrounds and research experience among students. Research subjects were active students in the odd semester of 2023, had completed a significant portion of the history education curriculum, and had taken courses such as local history, history practicum, history teaching practicum, and national history. Subjects were selected from semesters 3, 5, 7, 9, and 11 to evaluate the effectiveness of the teaching and learning process, as well as to identify and measure students' skills and knowledge in history, especially in historical thinking skills. Information about the research subjects is presented in Table 1.

Table 1

Research Participant

Semester	Male	Female	Amount
3	20	49	69
5	20	51	71
7	12	59	71
9	20	53	73
11	18	55	73
Total	90	267	357

Research Design

The ADDIE model, consisting of five stages: analysis, design, development, implementation, and evaluation [47], was used as the developmental approach for this research. The ADDIE model is user-friendly and can be integrated into curricula teaching information, skills, or attitudes [48]. Figure 1 illustrates the steps involved in this process.

The following are explanations of the ADDIE model stages used in this research:

Analyze

The purpose of this analysis is to obtain, identify, and examine data related to the creation of a research-based history learning model. The initial stage includes problem analysis and content analysis. Problem analysis begins by identifying the difficulties students face in learning history and historical thinking skills. Information is collected through interviews with students and faculty members. Furthermore, content analysis is conducted through the examination of curriculum documents from the University of Riau's history education program.

Design

This stage aims to design a research-based learning model. The design process refers to the conceptual framework obtained in the analysis stage. The design of the research-based learning model focuses on five aspects proposed by Joyce, including learning stages, social systems, the roles of teachers and students, support systems, and the nurture effect. The design results in this stage will be evaluated and refined until reaching an acceptable level of feasibility.

Development

This stage involves the realization of a comprehensive model design. Validation tests by experts, model trials, item validity tests, and model reliability tests are conducted at this stage. Expert validation involves competent specialists in the field, with six experts, including two content experts, two learning model experts, and two language experts, assessing the produced model. Model trials are conducted twice, involving small and large groups, to obtain accurate data on the developed model. The feasibility criteria are presented in Table 2.

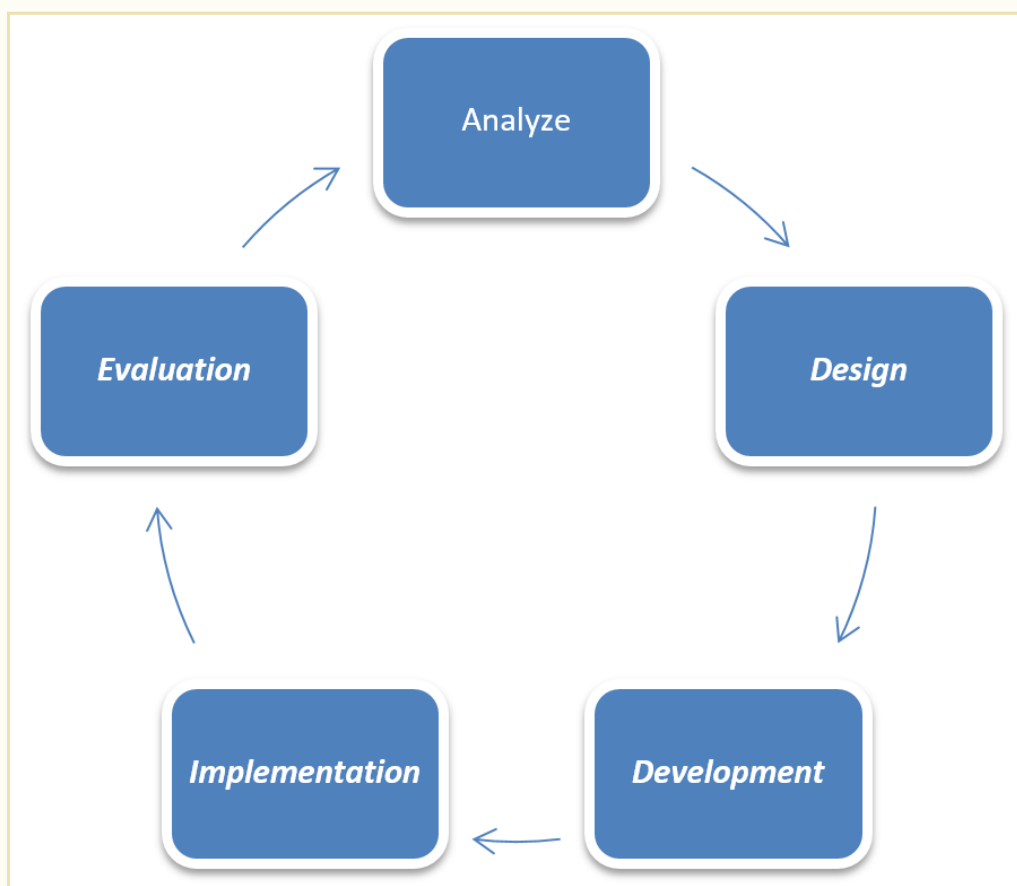


Figure 1 Phases of ADDIE

Table 2

Model Feasibility Criteria

Score	Description
≥ 4.00	Very Feasible
3.00 – 3.99	Feasible
2.00 – 2.99	Less Feasible
1.00 – 1.99	Not Feasible

Implementation and Evaluation

The research-based learning model has been developed and implemented in real learning situations. At this stage, the model's influence on the historical thinking skills of history education students at the University of Riau is measured. The model's influence is analyzed using a t-test. The ADDIE design steps used in this research are summarized in Figure 2.

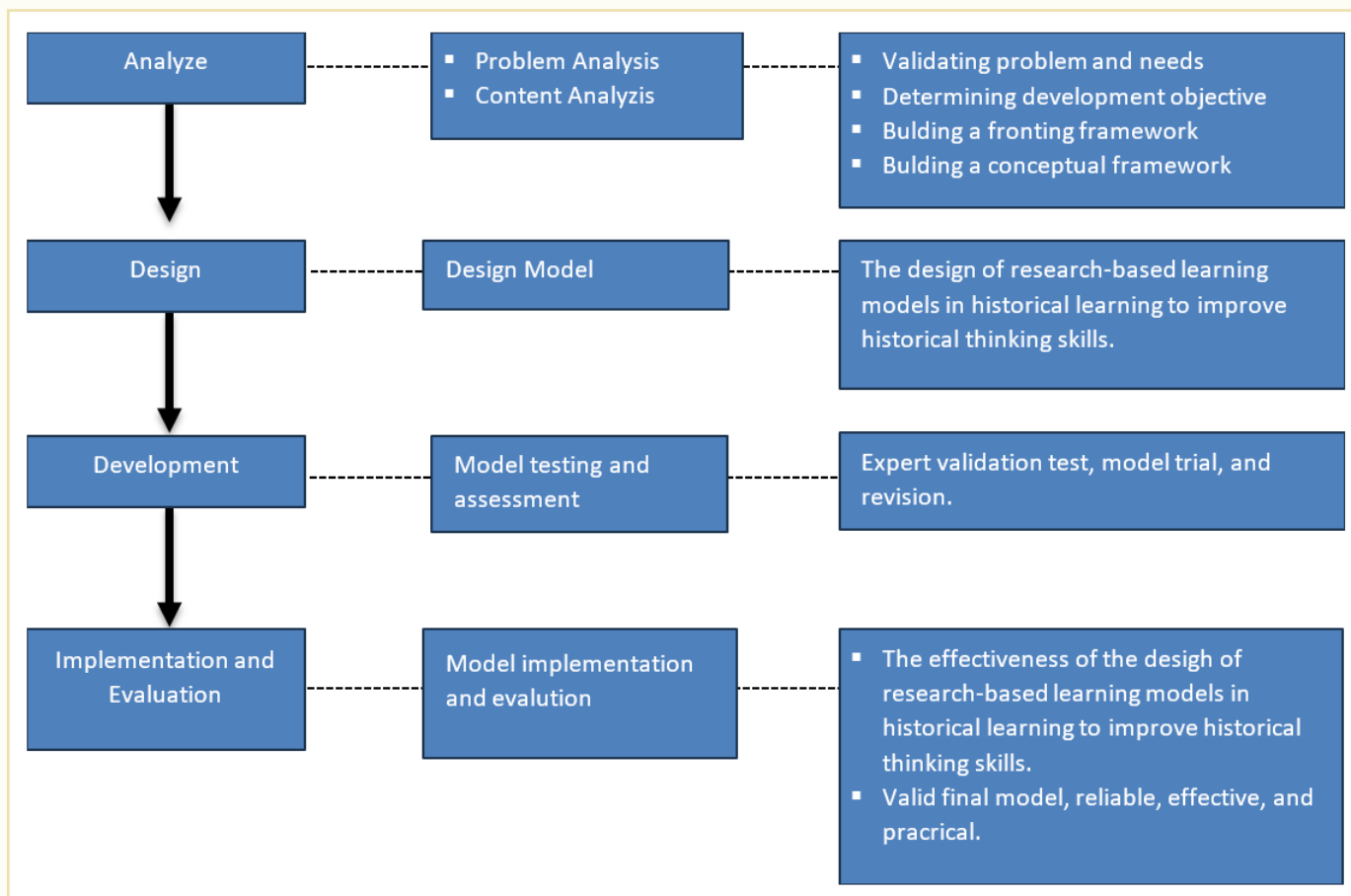


Figure 2 Research Flowchart

Research Instrument, Data Collection, and Data Analysis

This research utilizes various instruments, including observation, interviews, document analysis, questionnaires, and project assessments. Qualitative analysis is applied to observational, interview, and document review data, following the interactive approach proposed by Milles [49]. Qualitative data analysis involves stages such as data condensation, data presentation, conclusion drawing, and verification. On the other hand, quantitative analysis is used for expert validation, model testing, and influence testing. The model's influence is analyzed using a t-test, where students are tested twice, pre-test and post-test, to assess their initial and post-implementation historical thinking skills.

RESEARCH RESULTS

The development research of a research-based history learning model to enhance historical thinking skills resulted in (i) a valid, reliable, effective, and practical research-based learning model for improving historical thinking skills; (ii) results from expert validation involving two content experts, two media experts, and two language experts selected based on their respective expertise; (iii) trial results from the model conducted with 120 students in the Department of

History Education at the University of Riau; and (iv) results from the model's influence test. The development of the research-based learning model was carried out using the ADDIE model, consisting of five stages as follows.

Analysis

Problem Analysis

To identify issues in the history education learning process at the University of Riau, the researcher conducted interviews with history students and faculty members representing team teaching. Interviews were conducted with 60 students out of the total 120 respondents, selected based on their academic performance in the previous semester. Interviewed students were divided into three criteria of academic achievement: 20 students with high grades (A), 20 students with moderate grades (B), and 20 students with low grades (C). Four main aspects and one supporting aspect were the focus of the interview questions. Further details can be seen in Table 3 and Figure 3. The analysis results are presented as follows:

Table 3

Student Responses to Learning Aspects

Aspect	Student Grade A	Student Grade B	Student Grade C
Classroom Learning Process	The teacher divides the class into groups for history assignments; each group presents in front of the class.	The process involves lectures, discussions, presentations, and active student participation.	Classroom learning, including introduction, syllabus contract, group assignments, and group discussions.
Learning Process Management and Media/Methods/Models Used	Various media and models such as cooperative, discovery, lectures, Q&A, discussions, and group presentations.	Dominantly group learning model with weekly paper assignments and presentations using PowerPoint.	Cooperative and problem-based learning often used; media includes PowerPoint, video, and images.
Task Completion and Data Sources Used	Group tasks are completed with history books, scientific journals, and the internet. Field research is rare, except for Community Service Program (KKL).	Group tasks with weekly presentations, data sources from books, journals, and the internet. Field research in specific courses, more focused within the classroom.	Tasks are completed by searching references from books and scientific journals in the library; research is focused within the classroom.
Challenges in Task Completion	Difficulty in obtaining primary sources, especially for local history.	Limited information sources due to an incomplete book collection in the library.	Resource limitations, especially for local history.
Recommendations for Improving the Learning Process	Increase reference sources, more frequent field lectures, especially for local history.	Improve book collections, try field-based learning.	Conduct field research activities, especially for local history.

Based on the interviews with 60 students, it can be concluded that students in this study provided constructive suggestions to enhance the learning standards on campus. Students with grade A emphasized the importance of increasing the use of references by lecturers and campus facilities in delivering course materials. Additionally, they proposed periodic field lectures, particularly to explore local history around the campus, with the aim of allowing students to interact directly with authentic historical sources.

Suggestions from grade B students focused on improving the collection of the latest books in the campus library, enabling students to access more up-to-date materials. They also proposed the implementation of fieldwork-based learning methods to provide direct experience to students.

Grade C students highlighted the need to integrate field studies into local history courses, with the hope of providing more accurate information to students. In general, students emphasized the importance of direct experience and accurate information sources in the learning process. Lecturers instructed students to approach learning themes by studying various contemporary reference

sources. Field lectures and field research were considered effective means of providing practical experience and in-depth understanding of the history of the region around the campus. In conclusion, field studies were regarded as a key element to ensure students acquire reliable information in local history courses.

Based on the interview results with students, it was revealed that history lecturers at the University of Riau rarely use research-based learning models. Students tend to rely on secondary sources such as books, journals, and the internet to complete assignments. The main difficulty faced by students is finding written materials, especially for local history classes. Therefore, it is crucial to implement teaching methods that directly involve students in the creation of historical material, one of which is through research-based learning approaches. To better understand the learning process in history classes, we also conducted interviews with lecturers. The interview results with two lecturers representing team teaching are shown below.

Table 4

Evaluation of Learning Models and Quality of Student Assignments

Aspect	Lecturer 1	Lecturer 2
Learning Model, Methods, and Media	Group, problem-based, search & discovery	PBL, discovery learning, cooperative learning, project-based learning
Lectures, Q&A, group discussions, group presentations, quizzes	Discussions, presentations, Q&A, demonstrations, role play	
PowerPoint slides, images, videos	PowerPoint slides	
Challenges in the Learning Process	Students are less active in group discussions	Students are passive in the learning process
Low analysis of student responses	Low student motivation, some retaking courses	
Quality of Student Assignments	Variation in assignment quality: Good (20%), Adequate (30%), Poor (50%)	Not very good, some categories are good to very good
Analytical ability, data accuracy, chronological presentation, lack of primary data sources	Ability to present historical narratives, analysis needs improvement	
Causes of Low-Quality Student Assignments	Lack of ability to read historical sources	Low reading interest, low analytical ability, rarely participate in academic activities
Lack of research-based learning activities	Recommendations for Improvement	Improve reading ability of historical sources
Involve students in scientific research activities	Encourage the development of higher-order thinking skills	
Create a research-based learning process	In this interview, both lecturers agreed on the importance of helping students develop reading skills, especially in reading historical texts that require identification, analysis, synthesis, and generalization skills. The development of these skills is crucial to help students recognize the past and write historical narratives. Lecturers also agreed that encouraging student participation in scientific research activities, even on a small scale, can bring significant benefits.	

The most important point conveyed by both lecturers is their belief that history education should emphasize the development of reading skills, understanding the past, and high order thinking skills. Motivating students to engage in scientific investigations and creating a learning environment that encourages the development of historical thinking skills significantly enhances students' understanding of history. This agreement includes the view that encouraging student participation in scientific research and adopting teaching methods that support the development of historical thinking skills is a positive step in improving students' understanding of historical events.

Content Analysis

The results of the analysis of the learning objectives in the Department of History Education at the University of Riau are interpreted as follows:

Table 5

Analysis of Learning Objectives in the Department of History Education at the University of Riau

Learning Objective	Analysis
Training students' communication skills	Interactive two-way student-teacher learning models.
Getting used to online lectures	Students need to be accustomed to online learning.
Development of online services for the Study Program	The study program is not yet accustomed to online services.
Student involvement in community service	Collaboration in community service.
Microlearning policies and improvement	Policies and microlearning improvements are complete.
Development and revision of learning tools	Learning tools need to be adjusted to the times.
Use of assessment results for evaluation	Assessment results are used for evaluating learning improvements.
Integration of research and community service results	Research and community service results have not reached their maximum potential in learning.



Figure 4 History Learning Analysis Results

To achieve the goals and targets of the University of Riau in graduating students with 21st-century skills in 2035, research-based learning in history education is crucial. Through a rigorous and methodical approach, the main goal of research-based learning is to expand and enrich students' understanding of history. Improving students' critical thinking skills is one of the benefits of research-based learning in history teaching. Students must study various historical sources, synthesize information, develop generalizations, and make logical conclusions based on facts and evidence during the research process. This supports the growth of students' critical thinking skills, which is crucial for understanding history. Additionally, the research-based teaching model contributes to the development of students' presentation and writing skills. Students must have the necessary writing skills to produce organized and concise scientific articles and the ability to communicate research findings persuasively and methodically. This is excellent for helping students improve their verbal and written communication skills.

Based on the above table, it is concluded that the Department of History Education at the University of Riau needs to be organized with research-based activities by integrating local wisdom to produce superior, professional graduates who master 21st-century competencies. Based on the above explanation, it is concluded that it is important to develop a research-based history learning model to improve historical thinking skills.

Design

Based on the analysis results, it can be concluded that there is a need to develop a learning model that provides opportunities for students to actively engage in scientific research activities. Therefore, the development of a research-based history learning model needs to be carried out, and in this design phase, the model design will be developed.

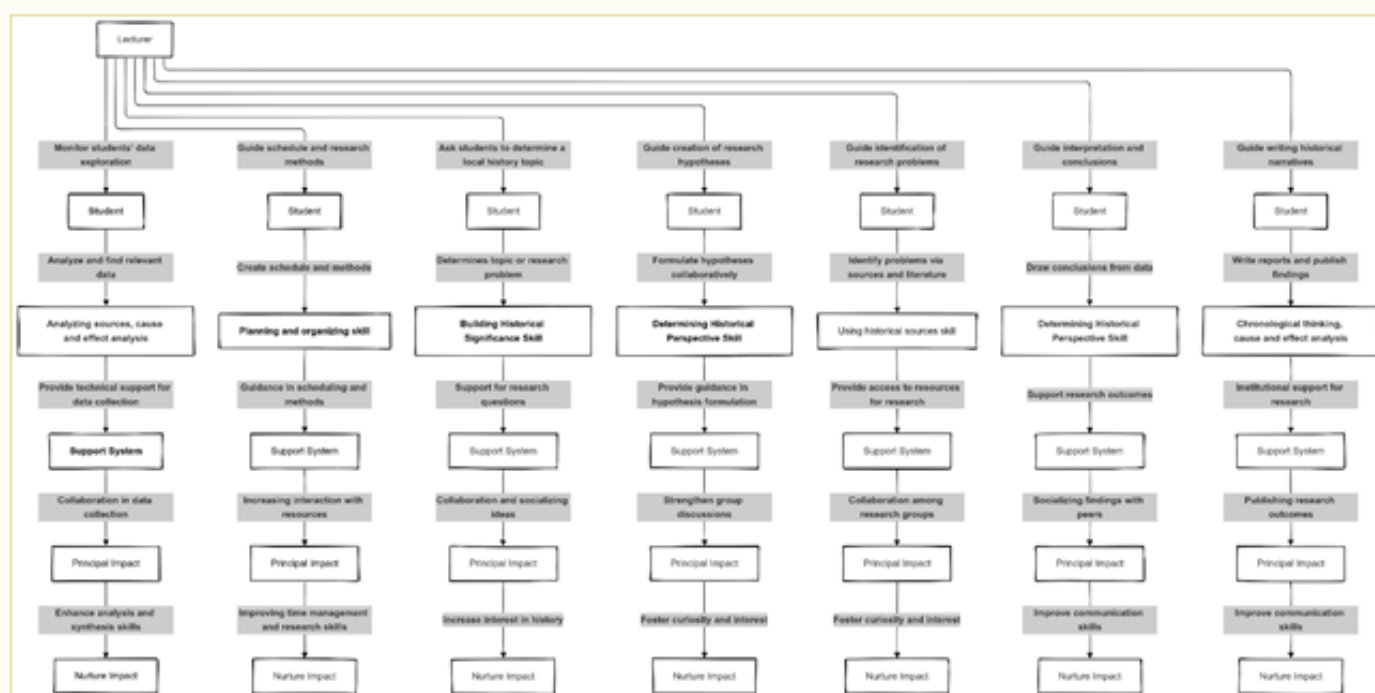


Figure 5 Research-Based Learning Model To Enhance Historical Thinking Skills

The figure explains a comprehensive research-based learning model with the goal of enhancing historical thinking skills in students. The learning stages are systematically designed, starting with the identification of local historical issues, and culminating in writing and disseminating historical narratives. Throughout these stages, various historical thinking skills are developed, such as building historical significance, determining historical perspectives, and using and analyzing historical sources. This model involves various social impact elements, including promoting collaboration, providing guidance, and enhancing access to resources. Additionally, the Nurture Effect emphasizes

the importance of fostering curiosity, responsibility, and students' interest in understanding history. Overall, this model integrates systematic learning activities, competency development, and support systems to create a holistic approach to history education, ensuring a supportive environment for students to develop high-level historical thinking skills.

Development Stage

In this stage, experts provided assessments and feedback on the design of the model previously developed by the researcher. The assessments and feedback from the researchers then served as material for revisions to refine the research-based history learning model to enhance historical thinking skills. The expert validation test involved three learning model experts selected based on their academic expertise. The results of the expert validation test are presented in Table 7.

Table 7

Expert Validation Test Results

Indicator	Score	Interpretation
Learning Stage	4.51	Very Suitable
Social System	4.53	Very Suitable
Roles of Lecturers and Students	3.92	Suitable
Support System	4.32	Very Suitable
Nurturing Effect	3.26	Suitable

Based on Table 7, it is identified that the three indicators of the model test conducted by experts show an average score of 4.32 with a very good category. The next step involves testing the model in small and large classes to assess the feasibility of the developed model. The results of the model testing are presented in the following table.

Table 8

Model Testing Results

Indicator	Score	Interpretation
	Small Group	Large Group
Learning Stage	4.32	4.67
Social System	4.55	4.62
Roles of Lecturers and Students	4.01	4.12
Support System	4.37	4.32
Nurturing Effect	3.31	3.24
Mean	4.11	4.19

Based on the results of the model testing in small and large classes, the average score for the small class is 4.11 with a very suitable category, and for the large class, the average score is 4.19 with a very suitable category.

Implementation and Evaluation Stage

After going through expert validation and model testing, the model is then revised and implemented in the learning process. The model implementation is carried out on history education students at the University of Riau, involving 120 selected students as the research sample. Pretest and posttest scores are compared to determine the model's impact. A paired sample t-test is also

conducted to assess the significance of the model's impact on students' historical thinking skills. The post-test results from both groups are presented as follows:

Table 9

Post-Test Results from Both Groups

Group		N	Mean	Std. Deviation	Std. Error of the Mean
Historical Thinking Skills	Control Group	120	67.31	2.716	.476
	Experimental Group	120	82.17	3.219	.637

Based on the analysis results, the average pretest score is 67.31, lower than the average posttest score of 82.17. This indicates a change in the level of students' historical thinking skills before and after using the research-based learning model. Furthermore, to determine whether the research-based history learning model significantly affects students' historical thinking skills, an independent samples t-test is conducted. The results of the t-test are presented as follows:

Table 10

T-Test Results

		T-Test for Equality of Means				
		t	df	Sig (2-tailed)	Mean Difference	Std. Error of the Difference
Historical Thinking Skills	Assume equal variances	18.933	118	.000	6.933	.366
	Assume unequal variances	18.933	57.860	.000	6.933	.366

The independent samples t-test analysis shows that the research-based history learning model significantly influences students' historical thinking skills. This is supported by the significance value of the t-test, which is 0.000 (less than 0.05).

DISCUSSION

This research demonstrates significant results in history education, particularly in the application of a research-based learning model. With a focus on history courses, this study signifies the positive impact generated by the research-based learning model on students' historical abilities. The highly significant t-test results, with values less than 0.05, serve as strong evidence of the effectiveness of this model. The research indicates that a research-based learning approach can assist students in developing historical thinking skills. Through investigation and analysis, the research-based learning model provides opportunities for students to expand their understanding of concepts related to history. Research-based learning in higher education positively impacts the quality of learning [50].

These findings mirror the results of Russell & Weaver research, demonstrating that research-based learning has a significant positive impact on students' understanding [51]. This success can be attributed to integrating research-based learning concepts into specific courses, such as local history. Additionally, this learning method can shape history education graduates, especially history teachers, to be professionals by involving them in a collaborative process driven by the teachers themselves [52]. The research findings align with recommendations from studies [53], suggesting that integrated research-based learning in teacher education programs can develop critical thinking, problem-solving, and research skills.

The developed model proves to be valid, reliable, and practical for use in history education at the University of Riau. Model validation through expert reviews and model testing in small and large

groups indicates that the model is suitable for enhancing students' historical thinking skills. The t-test result of 0.000, less than 0.05, indicates that the research-based history learning model is successful in improving students' historical thinking abilities. This research supports other studies [54; 55] that found that a research-based learning approach is effective in cultivating high-level thinking skills such as critical, analytical, historical, and scientific thinking.

The stages in the research-based learning model encourage students to activate high-level thinking skills [56]. In the first stage, students are involved in selecting and sorting issues or problems that require investigation and identifying answers or solutions to those issues [57]. This process allows them to activate historical significance-building skills, involving an understanding of the importance of a historical event. By choosing a topic or issue, students are encouraged to understand the significance of a specific event in history [58]. In the second stage, students interact with various historical sources, enhancing their skills in using primary source evidence. They clarify research problems using these sources to formulate questions for investigation. This stage is crucial as research is based on identified issues [59; 60]. In the third stage, students formulate research hypotheses by developing preliminary answers to the research problems obtained from identifying and analyzing various evidence and historical sources [61; 63]. This process encourages the development of historical perspective-taking skills as students are asked to form their views through research hypotheses derived from the source identification process.

The fourth stage involves planning and organizing the schedule and research methods. In this stage, students must choose and decide on the research methods to be used to complete the research project [64]. This step allows students to activate their planning and organizational skills. Neglecting this stage can lead to research project failure, making it crucial in the research-based learning process [65].

The fifth stage involves discovering, investigating, and analyzing research data. Students will have the opportunity to deal with research sources, read, identify, and analyze data [66; 67]. This stage encourages the development of various skills such as using primary source evidence, analyzing cause and effect, and recognizing change and continuity.

The sixth stage is interpretation and conclusion drawing. Students interpret research data by identifying and analyzing historical sources. This approach aligns with Monte-Sano concept of history learning that emphasizes evidence/documents [68; 69], perspectives, and interpretation, effectively helping students develop historical literacy skills. In this context, clear imagination and caution become key factors in producing strong interpretations. Research findings Peñalba, et.al also support this by providing empirical evidence that imagination can play a crucial role in helping students understand historical events [70].

To ensure objectivity, historians strive to base their writings on existing sources, data, and facts, although some level of subjectivity may still exist. On the other hand, drawing conclusions or making generalizations involves comprehensive fact-finding. When making statements or interpretations, researchers need to be careful, as the nature of history is recognizing the uniqueness of each past event. This sets history apart from other social sciences that aim to establish general patterns.

The final stage of historical research is creating a historical narrative and disseminating findings through publication. This stage marks the culmination of students' efforts to identify, analyze, and interpret data through scientific research [71; 72]. After developing a historical narrative through academic work, students are required to publish their findings in national and international journals. This aims to disseminate research findings to a broader audience. The process of writing and publishing scientific work enhances various scientific skills in students, such as historical literacy, chronological thinking, and communication [73]. The presentation of work should be chronological to facilitate reader understanding.

From the above discussion, it can be concluded that the research-based history learning model can overcome the limitations of previous learning models used in history education at the University of Riau. Models such as cooperative learning, problem-based learning, and expository learning have been proven to have limitations in activating historical thinking skills. In contrast, the research-based learning model can be an effective solution to enhance high-level thinking skills, including historical thinking, critical thinking, and analytical abilities.

Research-based learning provides several benefits, including giving students the opportunity to study history in more detail and organized ways, enhancing analytical and research skills, and integrating local and global information to understand historical contexts. Moreover, research-based learning can contribute to curriculum development and improve history teaching standards at the University of Riau. By disseminating research findings through publication, this model can also advance public understanding of history and strengthen national character. Through this approach, students can develop scientific skills such as historical literacy, chronological thinking, and communication.

CONCLUSION

The aim of this development research is to build a research-based history learning model that can enhance students' historical thinking abilities, considering the learning stages, social systems, roles of lecturers and students, and support systems. The model has been evaluated for its ability to improve historical thinking skills through inquiry-based learning activities, using the seven stages of the research-based learning process. The process includes selecting issues or topics related to local history, defining them, identifying, and addressing issues, planning research strategies, collecting, investigating, and analyzing data, drawing conclusions, writing historical narratives, and disseminating findings. The findings show that this learning model meets the feasibility criteria based on professional assessments and field tests. Adopting this research-based learning model is recommended to enhance historical thinking skills when studying history. However, the limitation of this research is the small sample size and using only one university as the research site. To obtain more reliable and comprehensive data, it is recommended to conduct further research with a larger sample and broader research areas.

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Authors

Asyrul Fikri

(Indonesia, Riau)

Lecturer

Universitas Riau Indonesia

Email: asyrul.fikri@lecture.unri.ac.id

ORCID ID: 0000-0002-9954-0837

Suarman

(Indonesia, Riau)

Lecturer

Universitas Riau Indonesia

Email: suarman@lecture.unri.ac.id

ORCID ID: 0000-0002-2739-3575

Isjoni

(Indonesia, Riau)

Lecturer

Universitas Riau Indonesia, Riau

Email: isjoni@lecture.unri.ac.id

ORCID ID: 0000-0003-3845-967X

Sumarno

(Indonesia, Riau)

Lecturer

Universitas Riau Indonesia

Email: sumarno.s@lecture.unri.ac.id

ORCID ID: 0000-0003-4367-4825

Author's contribution

A. Fikri: Conceptualization, Methodology, Investigation

Suarman: Resources, Data Curation, Writing – Original Draft

Isjoni: Validation, Writing – Review & Editing

Sumarno: Methodology, Formal Analysis

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