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Enhancing Historical Thinking through Picture-Based Active Learning and Contextual Teaching in Indonesian Vocational Schools

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ABSTRACT

This quantitative study investigates the impact of integrating the Picture and Student Active (PASA) learning model with a Contextual Teaching and Learning (CTL) approach on the historical thinking skills of vocational high school students in Indonesia. Using a multiple regression design with two sample classes, data were collected via questionnaire. Results indicate that the application of the PASA model and CTL approach individually does not guarantee a significant improvement in students' historical thinking. However, CTL plays a crucial mediating role, where its consistent integration with both the picture and student-active components indirectly leads to a significant positive effect. Simultaneously, the combined application of the PASA model and CTL approach has a significant influence, accounting for 52%-64% of the improvement in historical thinking skills, as indicated by the Adjusted R-Square value. This suggests that a synergistic, contextually anchored active learning model is effective in fostering higher-order historical reasoning.

KEYWORDS
Historical Thinking; CTL; PASA; Active Learning; History Education

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ABSTRAK

Penelitian kuantitatif ini mengkaji dampak integrasi model pembelajaran Picture and Student Active (PASA) dengan pendekatan Contextual Teaching and Learning (CTL) terhadap keterampilan berpikir historis siswa SMK di Indonesia. Menggunakan desain regresi berganda dengan dua kelas sampel, data dikumpulkan melalui kuesioner. Hasil menunjukkan bahwa penerapan model PASA dan pendekatan CTL secara individual tidak menjamin peningkatan signifikan pada berpikir historis siswa. Namun, CTL berperan penting sebagai mediator, di mana integrasinya yang konsisten dengan komponen gambar dan keaktifan siswa secara tidak langsung menghasilkan efek positif signifikan. Secara simultan, penerapan gabungan model PASA dan pendekatan CTL berpengaruh signifikan, menyumbang 52%-64% peningkatan keterampilan berpikir historis, sesuai nilai Adjusted R-Square. Temuan ini menunjukkan bahwa model pembelajaran aktif sinergis yang berkonteks efektif mendorong penalaran historis tingkat tinggi.

KATA KUNCI
Berpikir Historis; CTL; PASA; Pembelajaran Aktif; Pendidikan Sejarah

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Introduction

The implementation of history education grounded in historical consciousness specifically impacts the development of nationalist and patriotic values, as well as a humanistic perspective within the academic sphere (Popa, 2023; Zajda & Whitehouse, 2024). History learning serves as a guide for navigating present and future life, particularly in decision-making (Miles & Keynes, 2023). By its nature, it encourages students to contemplate the complex processes of societal development and change. As Dilthey posits, life gains a degree of transparency only through historical reason (Albornoz Muñoz & Sebastián Balmaceda, 2022). History acts as a parameter for action and decision-making based on past experiences. Historical events stimulate students' intelligence and critical faculties, subsequently forming their Historical Thinking. Wineburg (2006) argues that Historical Thinking enables students to comprehend and derive meaning from historical events, mapped across three temporal dimensions: past, present, and future.

Historical Thinking is a primary aspect students must master in learning history, given its urgency in forming good character, morals, and ethics (Éthier & Lefrançois, 2024). The processes of chronological thinking, understanding causality, grasping the three dimensions of time, and interpreting historical events automatically contribute to students' experiential learning and perspective development (Albornoz Muñoz & Sebastián Balmaceda, 2022; Whitehouse, 2021). As Tan Malaka stated, through history, people can grow and prosper, but they will falter, perish, and be neglected if they ignore it (Syamdani, 2012).

Enhancing Historical Thinking is achieved through the process of history learning itself. Instruction that merely involves memorizing dates, names, and events in historical narratives is insufficient, given students' generally low interest in history and its consequent impact on low Historical Thinking (Miralles-Sánchez et al., 2024; Tirado-Olivares et al., 2024). This is often represented by common occurrences such as students sleeping in class, lacking attention, having poor concentration, and essentially disregarding the material. These behaviors arise because students fail to find meaning in the history being taught. This is compounded by the widespread student perception that history is unimportant and useless, thus not requiring critical thought or an analytical attitude during learning (Cairns & Garrard, 2024b, 2024a; Miguel-Revilla, 2022). (Popa, 2023) further note that history instruction in schools has yet to fulfill the need for alignment with the core purpose of history education: to be meaningful and useful for present and future life, not merely a narrative of the past formally preserved.

Several factors influence the implementation of history education, including curriculum, teachers, materials, classroom interactions, instructional media, and the created learning climate (Fufa et al., 2024; Ogah, 2023). The vocational high school (SMK) curriculum is designed based on workplace needs, with an orientation toward shaping students' character and preparing them for the world of work and industry (Marta et al., 2023; Yoto et al., 2024). In alignment with this, the *Merdeka* Curriculum allocates a total of 72 lesson hours (JP) for history in Grade X (2 hours per week for two semesters), divided into 54 hours for intracurricular activities and 18 hours for the Pancasila Student Profile Strengthening Project (Kemendikbud, 2022). Given this limited time allocation and the demand for graduates ready for work, history teachers in SMKs are compelled to condense and maximize historical content to achieve learning objectives effectively.

Effective history instruction cannot be separated from learning resources and a teacher's ability to conceptualize and deliver material—not merely transferring knowledge but also fostering student understanding (Boadu & Oppong, 2024; Sharp et al., 2021). It is crucial for SMK history teachers to design the learning process well through the selection of appropriate models and approaches. The delivery of history content is a challenge teachers must master to achieve the goal of enhancing students' Historical Thinking (Bussell, 2024; Miralles-Sánchez et al., 2024; Wilke et al., 2023).

Historical Thinking encompasses historical reasoning, interpretation, and investigation (Bussell, 2024; Luís & Rapanta, 2020; Miralles-Sánchez et al., 2024; Tirado-Olivares et al., 2024). Woodrow Wilson and the Committee of Ten, as cited by Wineburg (2010), argued that history is not just about names in a story but provides an invaluable "mental power" often understood as judgment. This mental faculty shapes students' ability to view historical events critically through deep historical understanding, making it essential for students to develop and enhance their historical mindset (Reyes Parra et al., 2024; Thorp & Persson, 2020; Wilke et al., 2022). Referring to The Historical Thinking Concepts, a historically literate person can legitimize the absence of claims or, simply, distinguish between the misuse and use of history.

Historical thought is not merely an abstract skill but a structured practice of history (Wineburg, 2006). This makes it imperative for students, in particular, to hone and improve their Historical Thinking as a form of wisdom for engaging with the past, enabling them to analyze events that may appear realistic without being accurate, understand the value of a footnote, and interrogate existing historical sources.

The realization of Historical Thinking can be facilitated through the application of suitable learning models (Bussell, 2024; Wilke et al., 2023). Guerrero-Romera (2022) define a learning model as the structure, application, or framework of the learning process from start to finish, uniquely presented by the teacher. In other words, the use and application of a learning model significantly influences student understanding. The Picture and Student Active (PASA) model, which utilizes images as teaching media, aligns with this (Haward, 2020; Ponsoda-López de Atalaya et al., 2023). Joebagio explains that images help students construct a clear and accurate mental picture or imagination of an event. This model promotes active, creative, innovative, and enjoyable learning (de Leur et al., 2020; van Loon & Waldis, 2024). Through images, students independently reconstruct their understanding, demonstrating dynamic and flexible comprehension skills.

This model can be effectively supported by the Contextual Teaching and Learning (CTL) approach to create more interactive learning that encourages deeper meaning-making of historical events. CTL is a concept that helps teachers link the material taught with real-world situations (De La Paz et al., 2022; Sendur et al., 2021), aiming to make learning beneficial by increasing motivation, making student thinking more concrete, and fostering a conducive, enjoyable, and comfortable learning climate (Huijgen, Holthuis, van Boxtel, van De Grift, et al., 2019). It focuses on students constructing knowledge in their own minds, requiring real learning experiences (Getz et al., 2024).

Research indicates that applying the PASA model with the CTL approach can boost motivation and improve history learning outcomes (Pless & Katznelson, 2020). Increased motivation subsequently influences learning quality and activeness, creating a positive feedback loop for achieving learning objectives (Osei & Bjorklund, 2024). This is because

using images builds student imagination, which then develops into deeper historical meaning-making through contextual links between past events and contemporary issues. Direct student involvement in drawing connections from historical events to daily life implementation is central to this process, which is fundamentally understood as Historical Thinking.

However, despite the theoretical promise of these methods, empirical evidence regarding their specific, combined impact on fostering Historical Thinking in the constrained context of Indonesian vocational education remains limited. Therefore, this study focuses on direct and indirect influence of implementing the Picture and Student Active (PASA) model with the Contextual Teaching and Learning (CTL) approach on the Historical Thinking of Grade X students at SMKN 1 Cepu, and the extent of improvement generated by this integrated pedagogical intervention.

Research Questions

1. What is the effect of the partial application of the Picture and Student Active (PASA) model and the Contextual Teaching and Learning (CTL) approach on the Historical Thinking skills of vocational high school (SMK) students?
2. Does the Contextual Teaching and Learning (CTL) approach act as a mediator that strengthens the influence of the Picture and Student Active (PASA) model on students' Historical Thinking?
3. To what extent can the improvement in students' Historical Thinking be explained by the integrated and simultaneous application of the PASA model and the CTL approach?

Literature Review

The Imperative of Historical Thinking in History Education

The ultimate goal of history education transcends the mere memorization of chronologies and events; it is the cultivation of Historical Thinking (Albornoz Muñoz & Sebastián Balmaceda, 2022; Popa, 2022). This complex skill set involves the ability to engage in chronological reasoning, analyze causality, interpret sources, and construct meaning across the dimensions of past, present, and future (Albornoz Muñoz & Sebastián Balmaceda, 2022; Popa, 2022; Tirado-Olivares et al., 2024). Historical Thinking is not an abstract skill but a structured form of reasoning that equips students with the "mental power" for critical judgment, enabling them to discern between the use and misuse of historical narratives (Albornoz Muñoz & Sebastián Balmaceda, 2022; Wineburg, 2010). This competency is considered urgent as it forms the foundation for developing character, ethical values, and national consciousness, allowing students to derive relevant life lessons from the past (Albornoz Muñoz & Sebastián Balmaceda, 2022; Popa, 2022; Rusli, 2023). Therefore, effective pedagogy must move beyond knowledge transmission to actively foster these higher-order cognitive processes.

Contextual Challenges in History Learning at Vocational High Schools (SMK)

The implementation of history education that fosters Historical Thinking faces specific and significant challenges within the Vocational High School (SMK) context (Ledman,

2015). The SMK curriculum is fundamentally designed with a strong orientation toward preparing students for the world of work and industry, which often marginalizes subjects perceived as non-vocational, like history (Marta et al., 2023). This is reflected in the limited time allocation for history in the Merdeka Curriculum, requiring teachers to condense extensive material into a constrained schedule (Kemendikbud, 2022). Consequently, history instruction in schools often fails to fulfill its core purpose of being meaningful and applicable to contemporary and future life, remaining instead a compulsory narrative of the past (Marta et al., 2023). This situation is exacerbated by students' common perception that history is irrelevant and unimportant, leading to low motivation, disengagement, and a reluctance to employ critical and analytical thinking during lessons (Ledman, 2015).

Limitations of Conventional Models and the Potential of Active Learning

Conventional, teacher-centered history instruction that relies on textual narration and rote memorization has proven inadequate in overcoming the aforementioned challenges. Such methods fail to stimulate student interest or facilitate the deep understanding required for Historical Thinking (Ellinghaus et al., 2021; Fufa et al., 2024). In response, active learning models like Picture and Student Active (PASA) have emerged as alternatives. The PASA model leverages images as instructional media to help students visualize, imagine, and reconstruct historical events, thereby promoting a more active, creative, and engaging learning atmosphere (Ellinghaus et al., 2021; Tirado-Olivares et al., 2024) Pictures can function as representational, organizational, and informational tools that bridge theoretical description and practical understanding (Ellinghaus et al., 2021; Tirado-Olivares et al., 2024; Umbach & Mills, 2024). However, the use of images alone has documented limitations, including difficulties in interpretation without guidance, ineffectiveness with overly complex visuals, and logistical challenges in large classrooms, indicating that visual media cannot function optimally in isolation (Fufa et al., 2024; Umbach & Mills, 2024) (Sadiman et al., 2011).

Contextual Teaching and Learning (CTL) as a Meaning-Making Framework

To address the limitations of isolated techniques and anchor learning in relevance, the Contextual Teaching and Learning (CTL) approach is essential. CTL is a conceptual approach that assists teachers in connecting subject matter to real-world situations and students' prior knowledge (Bussell, 2024; De La Paz et al., 2022; Tirado-Olivares et al., 2024). Its core principle is constructing knowledge through authentic experiences, making learning more meaningful, permanent, and motivating for students (Lucero et al., 2024). In history education, CTL encourages students to draw connections ("benang merah") between historical events and contemporary social, cultural, or ethical issues in their own environment (Huijgen et al., 2018). This process transforms history from a distant story into a relevant lens for understanding the present, which is a fundamental aspect of Historical Thinking (Wineburg, 2006). Research supports that CTL can enhance learning outcomes by making abstract historical concepts more concrete and relatable (De La Paz et al., 2022; Tirado-Olivares et al., 2024).

Theoretical Synergy: Integrating PASA and CTL to Foster Historical Thinking

The integration of the PASA model and the CTL approach presents a powerful theoretical synergy for developing Historical Thinking. Individually, each component has strengths

but also clear weaknesses: pictures may not self-interpret, and active learning needs direction, while context requires a medium for engagement (Bamberger, 2023; De La Paz et al., 2022; Tirado-Olivares et al., 2024). Together, they form a coherent pedagogical framework. The CTL approach provides the essential meaning-making and relevance framework that guides the use of images and structures student activity (Bamberger, 2023; Tirado-Olivares et al., 2024; Wilke et al., 2023). Conversely, the visual and interactive components of the PASA model provide the concrete tools and engaging activities through which contextual understanding is actively constructed by students (Sendur et al., 2021; van Loon & Waldis, 2024). This synergy suggests that CTL acts as a crucial mediator, where consistent integration with both the picture and student-active elements can indirectly but significantly enhance historical reasoning. Prior studies indicate that this combined application can improve cognitive learning outcomes and student motivation, providing a foundation for its potential impact on the more complex outcome of Historical Thinking (López-García, 2023; Tirado-Olivares et al., 2024). This review thus posits that a pedagogically integrated, contextually anchored, and visually supported active learning model is a promising theoretical avenue for achieving the core goal of history education in vocational contexts.

Method

This study employed a quantitative approach with an experimental design to investigate the influence of independent variables on the dependent variable. According to Sugiyono (2014), quantitative research is an empirical study that utilizes measurable data, emphasizing the collection and analysis of numerical information.

Population, Sample, and Sampling Technique

The population of this study consisted of 10th-grade students at SMKN 1 Cepu. The sample was selected using Stratified Random Sampling—a random sampling technique that considers strata or specific characteristics. Based on students' prior academic achievement, three classes were initially selected to represent different strata: Class X AKL 2 (high achievement), Class X PM1 (medium achievement), and Class X DKV 2 (low achievement).

Data Collection Instrument

Data were collected using a Likert-scale questionnaire with five response alternatives (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) (Guerrero-Romera et al., 2021). The questionnaire was designed to measure the three independent variables and the dependent variable. To ensure the instrument's quality, validity and reliability tests were conducted prior to the main data collection, confirming the questionnaire's suitability for obtaining accurate and consistent data (Wagner & Dettweiler, 2024).

Data Analysis Procedure and Hypothesis Testing

The collected data were analyzed using Multiple Regression Analysis (R). Prior to the regression analysis, prerequisite tests were administered, including tests for normality, linearity, and homoscedasticity. Based on the results of these prerequisite tests, two sample classes met the assumptions for further analysis: X AKL 2 (high achievement) and X DKV 2 (low achievement). Consequently, hypothesis testing was conducted using regression analysis on these two classes.

Multiple regression analysis was chosen as it facilitates the examination of relationships involving more than one independent variable. The analysis was based on the following regression equation:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3$

Where:

- Y = Historical Thinking (Dependent Variable)
- a = Constant
- b_1, b_2, b_3 = Regression Coefficients
- X_1 = Picture Model
- X_2 = Student Active Model
- X_3 = Contextual Teaching and Learning (CTL) Approach

The calculation for the three-predictor regression coefficient (R) was performed using the following formula (Sugiyono, 2007):

$R_y(123) = \sqrt{((b_1\Sigma X_1Y + b_2\Sigma X_2Y + b_3\Sigma X_3Y) / \Sigma Y^2)}$

Where:

- R = Three-Predictor Regression Analysis
- X_1 = Picture Concept
- X_2 = Student Active Concept
- X_3 = Contextual Teaching and Learning (CTL) Approach
- Y = Historical Thinking

This analytical framework allowed for the testing of both partial influences (using t-tests on regression coefficients b_1, b_2, b_3) and simultaneous influence (using the F-test) of the integrated PASA model and CTL approach on students' Historical Thinking. The Adjusted R-Square (R^2) value was examined to determine the proportion of variance in Historical Thinking explained by the model.

Results

Three-Predictor Regression Analysis: Methodology and Results

This study employs a three-predictor regression analysis to examine the relationship between variables, consisting of two independent variables and one moderator variable. The analysis aims to determine the partial and simultaneous relationships between these variables and the direction of their influence (positive or negative) on the dependent variable, which in this context is the manifestation of history learning achievement, specifically Historical Thinking. The analysis uses the following regression equation:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3$

The analysis was conducted on the obtained sample data, with testing and elaboration performed for each selected sample class. The results of the three-predictor regression equation analysis are as follows.

1. Results for Sample Class AKL 2

Table 1. Regression Coefficients for AKL 2

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.502	17.892		1.872	.075
	X1	.128	.320	.061	.398	.694
	X2	.135	.268	.081	.501	.621
	X3	.817	.197	.732	4.155	<.001

a. Dependent Variable: Y

Regression Equation: $Y = 33.502 + 0.128X_1 + 0.135X_2 + 0.817X_3$

Interpretation:

a. The constant (a) is 33.502. This indicates that if the independent variables (the PASA model with CTL approach) are not included, students' Historical Thinking would still increase by 33.502%.
b. Coefficient b_1 (Picture) is 0.128. A 1% improvement in the application of the Picture variable (e.g., using more representative images) is associated with a 0.128% increase in Historical Thinking.
c. Coefficient b_2 (Student Active) is 0.135. A 1% improvement in the application of the Student Active variable (e.g., providing opportunities for deeper discussion) is associated with a 0.135% increase in Historical Thinking.
d. Coefficient b_3 (CTL) is 0.817. A 1% improvement in the application of the CTL approach (e.g., using historical case studies more relevant to students' environment) is associated with a 0.817% increase in Historical Thinking.

2. Results for Sample Class DKV 2

Table 2. Regression Coefficients for DKV 2

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	30.087	16.870		1.784	.084
	X1	.246	.248	.151	.994	.328
	X2	.625	.226	.427	2.770	.009
	X3	.403	.210	.296	1.923	.063

a. Dependent Variable: Y

Regression Equation: $Y = 30.087 + 0.246X_1 + 0.625X_2 + 0.403X_3$

Interpretation:

a. The constant (a) is 30.087, suggesting a baseline Historical Thinking increase of 30.087% without the intervention.
b. Coefficient b_1 is 0.246. A 1% improvement in the Picture variable is associated with a 0.246% increase in Historical Thinking.
c. Coefficient b_2 is 0.625. A 1% improvement in the Student Active variable is associated with a 0.625% increase in Historical Thinking.
d. Coefficient b_3 is 0.403. A 1% improvement in the CTL approach is associated with a 0.403% increase in Historical Thinking.

The equations for the two samples show clear differences in the magnitude of influence for each variable. While the constant is higher for AKL 2, the DKV 2 sample shows larger percentage increases for the Picture and Student Active variables.

Analysis of Effects

1. Partial Influence (t-test) of the PASA Model and CTL Approach

A t-test was conducted to see the partial influence of each independent variable on Historical Thinking. The criteria used an alpha of 0.05 (95% confidence level). H_0 (no influence) is accepted if the significance value (Sig.) > 0.05; H_a (significant influence) is accepted if Sig. < 0.05.

Table 3. Partial Test (t-test) Results

Variable	AKL 2				DKV 2			
	t count	**t table**	**Significance**		**t count**	**t table**	**Significance**	
X1-Y	0,398	2.039	0,694	0,025	0,994	2.036	0,328	0,025
X2-Y	0,501	2.039	0,621	0,025	2,770	2.036	0,009	0,025
X3-Y	4,155	2.039	<,001	0,025	1,923	2.036	0,063	0,025

- Picture (X_1): The partial application of the Picture model did not have a significant effect on Historical Thinking in either sample (Sig. > 0.05). This aligns with identified limitations of using images in learning, such as difficulties in extracting information from visuals without teacher guidance, overly complex images, limited visibility in large classes, and the general scarcity of authentic historical photographs. Images alone failed to stimulate historical imagination and reconstruction, requiring another variable to maximize their function (Peñalba et al., 2020).
- Student Active (X_2): A significant effect was found only in the DKV 2 sample (t-count > t-table, Sig. = 0.009 < 0.05). In AKL 2, the effect was not significant. Data showed that 27.5% of AKL 2 students did not achieve active learning, compared to 19.4% in DKV 2. This suggests that internal factors like motivation, interest in history, and physical condition (Shannahan & Fredericks, 2022; Stack, 2024) may have influenced the variation in student activeness between the two classes.
- CTL (X_3): A significant partial effect was found only in the AKL 2 sample. The lack of significance in DKV 2 may be attributed to external factors like class timing. AKL 2 was taught in the morning (07:00-08:30), while DKV 2 was taught in the late afternoon (14:15-16:00) with a break, potentially leading to fatigue and decreased concentration, hindering the effectiveness of the contextual approach (Tirado-Olivares et al., 2021).

2. Indirect Influence of CTL as a Mediator (F-test)

An F-test was conducted to analyze the indirect effect of the CTL approach (X_3) in mediating the relationship between the Picture (X_1) and Student Active (X_2) models and Historical Thinking (Y).

Table 4. Mediation Test (F-test) Results for Picture-CTL

Sample	F_{count}	F_{table}	Sig.
AKL 2	24,345	3,294	<0,001
DKV 2	14,260	3,284	<0,001

Table 5. Mediation Test (F-test) Results for

Sample	F_{count}	F_{table}	Sig.
AKL 2	24,495	3,294	<0,001
DKV 2	20,493	3,284	<0,001

The results show a significant indirect influence in both samples. Although the Picture model alone had no significant partial effect, its combination with the CTL approach did. This proves that CTL acts as a mediator, strengthening the influence of the Picture model by providing the contextual information needed to understand historical images (Smets, 2024). Similarly, for Student Active, CTL mediates and creates a positive interaction, especially in the AKL 2 sample where the partial effect of Student Active was not significant. This finding is supported by prior research indicating that CTL helps students connect material to their lives, making learning more meaningful and permanent (Sendur et al., 2021; Skårås, 2021; Tilak et al., 2023).

3. Simultaneous Influence and Improvement in Historical Thinking

An F-test was conducted to determine the simultaneous influence of all independent variables (X_1, X_2, X_3) on Historical Thinking (Y).

Table 6. Simultaneous Test (F-test) Results

Sample	F_{count}	F_{table}	Sig.
AKL 2	15,785	2,911	<0,001
DKV 2	13,987	2,901	<0,001

The simultaneous application of the PASA model and CTL approach has a significant positive effect on students' Historical Thinking in both classes. The Adjusted R-Square values indicate that this integrated model explains 64.0% of the variance in Historical Thinking for AKL 2 and 52.7% for DKV 2. This can be categorized as a moderate to strong influence. The remaining variance (36% and 47.3%, respectively) is attributed to other factors outside this study's variables.

The synergy between visual aids (Picture), active student engagement, and contextual relevance (CTL) fosters deeper historical reasoning. This supports previous findings that such integrated models improve cognitive learning outcomes and historical understanding (Polenghi, 2024; Shapiro et al., 2025; Tilak et al., 2023). The variation in the magnitude of effect between the two classes, one with higher average learning outcomes (AKL 2) and one with lower (DKV 2), suggests that factors like prior academic achievement may interact with the intervention's effectiveness, warranting further investigation.

Discussion

Based on the research findings, the cultivation of Historical Thinking remains the primary objective of history education (Popa, 2023; Sendur et al., 2021). This skill transcends mere memorization, requiring students to engage in chronological thinking, understand causality, and interpret events across past, present, and future dimensions (Byrne, 2024; Tramacere, 2022). Historical Thinking is a structured practice that forms a mental framework for critical judgment and wisdom in analyzing historical sources, ultimately aiming to foster character and ethical values in students (Edling et al., 2020; Elgabsi, 2024; Lindström,

2024) (Wineburg, 2006). However, achieving this goal is often hindered by traditional pedagogical approaches focused on rote learning of names and dates, which fail to make history meaningful for contemporary and future life (Deng, 2024). Consequently, students frequently perceive history as unimportant, leading to low motivation and a lack of analytical attitude in the classroom (Shalgimbekova et al., 2024; Vu et al., 2024; Wijnia, 2020).

The challenges in fostering Historical Thinking are multifaceted, stemming from both curriculum constraints and instructional limitations. In the vocational high school (SMK) context, the curriculum is heavily oriented toward preparing students for the workforce, resulting in limited time allocation for history subjects, as seen in the Merdeka Curriculum structure (Misbah et al., 2020; Suputra et al., 2024; Yoto et al., 2024; Kemendikbud, 2022). This time pressure compels teachers to condense material, often at the expense of depth and meaningful engagement (Buehler et al., 2024; Rodliyah et al., 2024; Yoto et al., 2024). Furthermore, common instructional problems include passive learning environments where students are disengaged, as evidenced by behaviors like sleeping in class or ignoring the material (Misbah et al., 2020; Skarpaas, 2024; Yoto et al., 2024). These issues are compounded by external factors such as large class sizes, inadequate facilities, and poorly timed class schedules, which can severely impact student concentration and the overall learning climate (Yoto et al., 2024). Therefore, merely delivering historical narratives is insufficient; a significant shift in teaching methodology is required to make history relevant and intellectually stimulating.

To address these challenges, the integration of the Picture and Student Active (PASA) model offers a promising pedagogical alternative. This model emphasizes active, creative, and enjoyable learning by using images as a central instructional medium (Magnus et al., 2020; Ngu et al., 2026; Van Melik & Ernste, 2019). Pictures can serve various functions, from decorative to organizational and informational, acting as a mediator to bridge theoretical descriptions and practical understanding (Ballesteros-Mejía & Madero, 2024; Bellmer & Möller, 2023). By visualizing historical events, images help students reconstruct and imagine the past more clearly, thereby increasing motivation and engagement (Ebbrecht-Hartmann et al., 2023; Mulders et al., 2026; Sospedra-Roca et al., 2022). However, the use of images alone has limitations; they can be difficult to interpret without proper guidance, ineffective if overly complex, and challenging to use in large groups (Sadiman et al., 2011). This indicates that the Picture component, while valuable, requires strategic integration with other active learning elements to fully realize its potential in scaffolding complex historical reasoning.

The contextualization of learning through the CTL approach is the critical element that synergizes with the PASA model to effectively promote Historical Thinking. CTL is a concept that helps teachers connect subject matter to real-world situations and students' prior knowledge, making learning more meaningful and permanent (Huijgen, Holthuis, van Boxtel, & van de Grift, 2019; Thorp & Persson, 2020). Research indicates that combining PASA with CTL can enhance learning motivation, cognitive outcomes, and student activeness (Cents-Boonstra et al., 2021). This synergy works because CTL provides the necessary framework for students to "draw a thread" between historical events depicted in images and contemporary issues in their own lives, deepening their interpretive process. The active discussion and inquiry fostered by the Student Active component, when

guided by contextual relevance, encourage students to independently analyze and construct perspectives based on facts. Thus, the PASA model, mediated and given deeper meaning by the CTL approach, creates an interactive learning structure that moves students beyond passive reception toward the active, critical historical reasoning that defines true Historical Thinking (Wineburg, 2006).

Conclusion

This study demonstrates that while the Picture and Student Active (PASA) model and the Contextual Teaching and Learning (CTL) approach do not individually exert a significant direct effect on students' Historical Thinking, their integrated application yields a meaningful impact. The CTL approach functions as a critical mediator, providing the necessary contextual framework that amplifies the effectiveness of both visual (Picture) and activity-based (Student Active) components. The simultaneous and consistent implementation of the combined PASA-CTL model significantly enhances Historical Thinking, accounting for 52% to 64% of its variance, with each 1% increase in implementation quality corresponding to a 0.1% to 0.8% improvement in this higher-order skill.

The findings carry important implications for history pedagogy, particularly in vocational education contexts where time and curricular constraints are prominent. They underscore the necessity of moving beyond isolated techniques toward synergistic, contextually anchored active learning designs. For practitioners, this suggests that effective history instruction should strategically pair visual aids and student-centered activities with deliberate efforts to link historical content to students' real-world experiences and prior knowledge. Theoretically, the study reinforces the constructivist principle that historical reasoning is best fostered through pedagogical models that engage students in authentic meaning-making, where context provides the essential "bridge" between engagement and deep understanding.

This study is subject to several limitations. The sample was confined to two classes within a single vocational school, which may restrict the generalizability of the findings. Factors such as class timing, prior academic achievement levels, and unmeasured student variables (e.g., intrinsic motivation, specific prior knowledge) likely influenced the differential effectiveness of the intervention between the two sample classes. Future research should employ a larger, more diverse sample across multiple institutions and incorporate longitudinal or quasi-experimental designs to better establish causality. Additionally, qualitative inquiries could provide deeper insight into how students cognitively process historical images within a contextual framework, further elucidating the mechanisms behind the observed synergy.

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