



Student Multidisciplinary Literacy through Local History, Environmental Literacy, and Language-Based Learning: A Study at Senior High Schools in Banyuwangi

Belvira Monica Harsono¹, Rizza Ananda Putri², Linda Lusiani³, Faradiba Mahadewi Budianto⁴, Mahfud^{*})

1. Universitas 17 Agustus 1945 Banyuwangi, Indonesia

^{*}Corresponding Author: mahfud@untag-banyuwangi.ac.id

Abstract

This study aims to analyze the levels of historical literacy, environmental literacy, and English language literacy among students and the relationships among these three literacies at senior high schools in Banyuwangi. School learning tends to separate historical, environmental, and linguistic knowledge, when in fact these three areas can be developed through the same local topics. This research employs a descriptive-correlational survey method with a mixed methods approach. Research subjects consisted of high school students, history teachers, biology teachers, and English teachers from several schools in Banyuwangi. Data were collected through literacy tests, questionnaires, and interviews, then analyzed using descriptive and correlational statistical methods. The results show that students' historical, environmental, and language literacy levels are in the moderate to low categories, with a significant positive correlation found among the three types of literacy. These findings indicate that improvement in one type of literacy has the potential to support improvement in other literacies. This research provides empirical evidence regarding the relationship between historical, environmental, and language literacy in contextual learning, and offers recommendations for developing integrated learning approaches at the senior high school level.

Keywords: multidisciplinary literacy, historical literacy, environmental literacy, English language literacy, contextual learning

INTRODUCTION

Education in Indonesia today faces a significant challenge in preparing students with multidisciplinary competencies that

are essential for navigating an increasingly complex and interconnected world. The concept of literacy has evolved far beyond the traditional definition of reading and writing abilities to encompass a broader spectrum of competencies, including historical literacy, environmental literacy, and language literacy (UNESCO, 2017; OECD, 2019). These three forms of literacy are not isolated skills but are deeply interconnected, as understanding history requires contextual environmental knowledge, and both are mediated through language. However, school learning in Indonesia has traditionally compartmentalized these subjects, treating history, biology, and language as separate and unrelated disciplines (Adinugraha & Ratnapuri, 2020).

Field observations conducted at several senior high schools in Banyuwangi Regency reveal a persistent gap between the potential for integrated learning and the reality of classroom practice. In these schools, history is taught as a series of dates and events disconnected from students' lived experiences, biology focuses on abstract concepts without local contextualization, and English language instruction emphasizes grammatical structures rather than meaningful communication about local issues (Harsono et al., 2023). This separation is particularly problematic in regions like

Banyuwangi, which possesses rich historical narratives, diverse ecosystems, and unique cultural traditions that could serve as powerful integrating themes for multidisciplinary learning.

The concept of multidisciplinary literacy has gained increasing attention in educational research as scholars recognize that real-world problems rarely fit neatly into single disciplinary categories (Klaassen, 2018; Spelt et al., 2020). Multidisciplinary literacy refers to the ability to understand, interpret, and apply knowledge and skills from multiple disciplines to address complex issues. In the context of education, developing multidisciplinary literacy means helping students see connections between subjects and apply integrated knowledge to authentic problems (Mansilla & Duraising, 2021). This approach is particularly relevant for developing competencies such as critical thinking, problem-solving, and global citizenship.

Historical literacy, defined as the ability to understand, interpret, and critically evaluate historical narratives and sources, is essential for developing informed citizens (Wineburg, 2018; Nokes, 2020). Historical literacy involves not only knowing historical facts but also understanding historical methods, recognizing multiple perspectives, and applying historical thinking to contemporary issues. Research has shown that students who develop strong historical literacy are better equipped to understand current social and environmental challenges (Seixas & Morton, 2022; VanSledright, 2020). However, studies in the Indonesian context indicate that historical literacy among secondary school students remains relatively low, with many students unable to connect historical events to their local contexts (Prasetyo, 2019; Suryani & Setyowati, 2021).

Environmental literacy, encompassing knowledge of ecological systems, awareness of environmental issues, and the skills and motivation to take responsible environmental action, has become increasingly critical in the face of global environmental challenges (Hollweg et al., 2021; Stevenson et al., 2022). Environmentally literate individuals understand the interconnections between human activities and natural systems and are equipped to make informed decisions about environmental issues (McBride et al., 2023). Research in Indonesia has shown that environmental literacy levels vary significantly across regions and school types, with many students lacking awareness of local environmental issues and their historical roots (Rahmawati et al., 2023; Zidny & Eilks, 2022).

Language literacy, particularly English language literacy, is

increasingly recognized as essential for accessing global knowledge and participating in international discourse (Cummins, 2021; García & Wei, 2022). In the Indonesian context, English is taught as a foreign language from primary through secondary education, yet many students graduate with limited communicative competence in English (Lie, 2020; Zein, 2022). Research suggests that integrating English instruction with locally relevant content can enhance both language learning and content knowledge (Rosmayanti, 2023; Amelia & Chandra, 2020). However, few studies have examined the relationship between English language literacy and other forms of literacy such as historical and environmental literacy.

The integration of local history and environmental education has been explored in several recent studies in the Indonesian context. Munggarani et al. (2023) investigated the implementation of smart ecopedagogy through local history integration in social studies learning, finding that local historical narratives serve as meaningful and contextual learning resources that bridge cultural heritage and environmental education. Similarly, research on green history implementation in secondary schools has shown that learning history through a green history approach can help students develop environmental awareness integrated through local history material (Nadilla et al., 2023). These studies demonstrate the potential for integrating historical and environmental learning, but they have not systematically examined the role of language in this integration.

Ethnopedagogy, which refers to educational approaches and practices based on local wisdom, has emerged as a promising framework for integrating local knowledge into formal education (Adinugraha, 2020; Oktavianti & Ratnasari, 2018). Research by Rahmawati et al. (2023) demonstrated that local traditions can be integrated into biology learning in biodiversity, conservation, ecosystems, and environmental change topics. The study concluded that such integration enhances contextual learning, environmental literacy, and character development in students. Similarly, research on the integration of ethnopedagogy in the Merdeka Curriculum has shown that local wisdom can serve as a reference for developing teaching materials, modules, and project assignments (Rahmawati et al., 2023). However, these studies have not examined the simultaneous development of historical, environmental, and language literacies.

The integration of local history with English language teaching has been explored as a strategy for fostering global citizenship. Rosmayanti (2023) explored how integrating local

history with English Language Teaching (ELT) can foster global citizenship, highlighting the importance of incorporating regional narratives in language lessons to enhance lexical, grammatical, and pragmatic skills while fostering cultural insight and analytical aptitude. The chapter presents models like place-based learning, collaborative inquiry projects, and digital heritage storytelling, which map local memory onto global concerns like migration, ecological change, and social equity. This approach not only enhances English proficiency but also fosters reflective and deliberative skills for thoughtful citizens.

Research on the harmonization of integrated literacy activities between Indonesian language literacy, English literacy, and environmental literacy has shown that literacy community instructors can effectively harmonize these activities through project-based learning and contextual teaching approaches (Atlantis Press, 2023). The study found that integrated literacy activities provide opportunities for students to contextualize learning needs with daily needs through student-centered activities such as problem-solving, group discussions, and joint projects. However, this study did not specifically examine the role of historical literacy in this integration.

The research gap identified in this study is the lack of empirical evidence regarding the relationships among historical literacy, environmental literacy, and English language literacy among senior high school students in Indonesia. While previous research has examined these literacies separately or in pairs, no study has systematically investigated how these three forms of literacy are interrelated and whether improvement in one supports development in the others. Furthermore, there is limited research on how local context, such as the rich historical and environmental resources of Banyuwangi, can be leveraged to develop multidisciplinary literacy.

The novelty of this research lies in its simultaneous examination of three types of literacy—historical, environmental, and English language—and their interrelationships. This research goes beyond previous studies that focused on single or paired literacies by investigating how these three literacies are connected and whether they can be developed synergistically. The study also contributes to the growing body of research on contextual and place-based learning by examining how local resources in Banyuwangi can support multidisciplinary literacy development.

The research is grounded in several theoretical frameworks. First, the concept of multidisciplinary literacy provides the overarching framework for understanding how different types of literacy can be integrated (Mansilla & Duraising, 2021; Klaassen, 2018). Second, place-based education theory emphasizes the importance of learning that is rooted in local places and communities (Gruenewald, 2003; Sobel, 2004). Third, the ethnopedagogy framework highlights the value of integrating local wisdom into educational practices (Adinugraha, 2020; Oktavianti & Ratnasari, 2018). These theoretical perspectives together support the argument that integrating historical, environmental, and language learning through local topics can enhance multiple forms of literacy simultaneously.

This research is also relevant to current educational policy in Indonesia, particularly the Merdeka Curriculum, which emphasizes project-based learning, contextual learning, and the development of Pancasila student profiles (Badan Standar, 2022). The Merdeka Curriculum provides flexibility for educators to develop learning experiences that are relevant to students' local contexts and that integrate multiple subjects. This research provides empirical evidence that can inform the implementation of the Merdeka Curriculum by demonstrating the relationships among different types of literacy and the potential for integrated approaches.

The study also has practical implications for teachers and curriculum developers. If significant relationships are found among historical, environmental, and language literacies, this would support the argument for integrated teaching approaches that simultaneously develop multiple literacies. Teachers could design learning experiences that use local historical topics as the context for both environmental education and English language development. Curriculum developers could create integrated modules that address multiple learning objectives through a single thematic unit.

Furthermore, this research contributes to the broader discourse on education for sustainable development. The United Nations Sustainable Development Goals (SDGs), particularly Goal 4 (Quality Education) and Goal 13 (Climate Action), emphasize the importance of education that develops knowledge, skills, and attitudes for sustainable development (UNESCO, 2017). By examining the relationships among historical, environmental, and language literacies, this research provides insights into how education can prepare students to address complex sustainability challenges that require multidisciplinary understanding and the ability to

communicate across linguistic and cultural boundaries.

MATERIALS AND METHODS

This research employs a descriptive-correlational survey method with a mixed methods approach. The descriptive-correlational design was chosen because it allows researchers to describe the current state of students' literacy levels and examine the relationships among different types of literacy (Creswell & Creswell, 2018). The mixed methods approach enables the collection of both quantitative data through tests and questionnaires and qualitative data through interviews, providing a more comprehensive understanding of the phenomena under investigation (Creswell & Plano Clark, 2018). This combination of methods allows for triangulation of findings and deeper insights into the relationships among the three types of literacy.

The research population consisted of senior high school students in Banyuwangi Regency, along with their history, biology, and English teachers. The sample was selected using purposive sampling from several senior high schools in Banyuwangi, including SMA Negeri 1 Banyuwangi, SMA Negeri 1 Glagah, and SMA Negeri 1 Rogojampi. The selection criteria for schools included: (1) implementation of the Merdeka Curriculum, (2) availability of history, biology, and English teachers willing to participate, and (3) geographical diversity to ensure representation of different school contexts. A total of 180 students and 15 teachers (5 history teachers, 5 biology teachers, and 5 English teachers) participated in the study.

Data collection techniques included literacy tests, questionnaires, and semi-structured interviews. The literacy tests were designed to measure students' historical literacy, environmental literacy, and English language literacy. The historical literacy test assessed students' ability to understand historical concepts, analyze historical sources, and apply historical thinking skills (Wineburg, 2018). The environmental literacy test measured students' knowledge of ecological concepts, awareness of environmental issues, and attitudes toward environmental action (Hollweg et al., 2021). The English language literacy test assessed students' reading comprehension, vocabulary knowledge, and ability to understand texts about historical and environmental topics. All tests were developed based on established literacy frameworks and validated by experts in each field.

Questionnaires were administered to both students and

teachers to collect data on their perceptions of literacy levels, teaching practices, and the integration of subjects. The student questionnaire included items about their interest in history, environmental issues, and English, as well as their perceptions of connections among these subjects. The teacher questionnaire included items about their teaching approaches, use of local resources, and perceptions of students' literacy levels. Semi-structured interviews were conducted with teachers to gain deeper insights into their practices and challenges in developing students' literacy.

The collected quantitative data were analyzed using descriptive statistics (mean, standard deviation, frequency distributions) and inferential statistics (Pearson correlation analysis). The descriptive statistics were used to describe the levels of historical, environmental, and English language literacy among students. Pearson correlation analysis was used to examine the relationships among the three types of literacy. The qualitative data from interviews and observations were analyzed using thematic analysis, following the procedures outlined by Braun and Clarke (2021), which involve familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The quantitative and qualitative findings were then integrated in the interpretation phase to provide a comprehensive understanding of the relationships among the three literacies.

RESULTS AND DISCUSSION

The results of this research are presented in three main sections: descriptive statistics of literacy levels, correlational analysis of relationships among literacies, and qualitative findings from interviews and observations. The data analysis reveals important patterns in students' literacy levels and the relationships among historical, environmental, and English language literacies at senior high schools in Banyuwangi.

Based on the literacy tests administered to 180 students, the mean scores for each type of literacy were calculated. The historical literacy test had a mean score of 62.4 (SD = 14.2) out of a possible 100 points, indicating a moderate level of historical literacy. The environmental literacy test had a mean score of 58.7 (SD = 15.6), also in the moderate category. The English language literacy test had a mean score of 55.3 (SD = 16.8), which falls into the low-moderate category. These results suggest that students' literacy levels across all three domains are below the desired competency levels, with English language literacy being the lowest.

Table 2. Descriptive Statistics of Student Literacy Test Scores

Literacy Type	N	Mean	Standard Deviation	Minimum	Maximum	Category
Historical Literacy	180	62.4	14.2	28	89	Moderate
Environmental Literacy	180	58.7	15.6	24	86	Moderate
English Language Literacy	180	55.3	16.8	20	82	Low-Moderate

The correlational analysis using Pearson correlation coefficients revealed significant positive relationships among the three types of literacy. The correlation between historical literacy and environmental literacy was $r = 0.524$ ($p < 0.001$), indicating a moderate positive relationship. The correlation between historical literacy and English language

literacy was $r = 0.418$ ($p < 0.001$), indicating a moderate positive relationship. The correlation between environmental literacy and English language literacy was $r = 0.462$ ($p < 0.001$), also indicating a moderate positive relationship. These findings suggest that students who perform well in one type of literacy tend to perform well in the other types as well.

Table 3. Pearson Correlation Coefficients among Literacy Types

Literacy Type	Historical Literacy	Environmental Literacy	English Language Literacy
Historical Literacy	1.000	0.524**	0.418**
Environmental Literacy	0.524**	1.000	0.462**
English Language Literacy	0.418**	0.462**	1.000

****Note:** $*p < 0.001$ (2-tailed)

The questionnaire results revealed interesting patterns in students' perceptions of the three subjects. When asked about their interest in each subject, 45% of students expressed high interest in history, 38% expressed high interest in environmental topics, and only 29% expressed

high interest in English. However, when asked about the relevance of these subjects to their daily lives, 52% rated environmental topics as highly relevant, 44% rated history as highly relevant, and only 31% rated English as highly relevant. These findings suggest that while students recognize the relevance of environmental and historical topics, they perceive English as less relevant to their lives.

Table 4. Student Perceptions of Subject Interest and Relevance

Subject	High Interest (%)	Moderate Interest (%)	Low Interest (%)	High Relevance (%)	Moderate Relevance (%)	Low Relevance (%)
History	45	35	20	44	38	18
Environment	38	40	22	52	32	16
English	29	38	33	31	39	30

The qualitative data from teacher interviews provided additional insights into the relationships among the three literacies. All 15 teachers interviewed agreed that there is potential for integrating history, environmental studies, and English in their teaching. However, they identified several barriers to integration, including: (1) lack of training in integrated teaching approaches, (2) curriculum constraints that separate subjects, (3) limited availability of integrated teaching materials, and (4) time constraints in covering required content. One history teacher stated, "I can see how local history could be used to teach about the environment, but I don't have the resources or training to do it effectively" (Teacher Interview, History-01).

The thematic analysis of teacher interviews revealed four main themes: (1) Recognition of integration potential, (2) Barriers to integration, (3) Current integration practices, and (4) Recommendations for improvement. Under the theme of current integration practices, some teachers reported using local examples in their teaching, such as discussing local historical events or using local environmental issues as examples. However, these practices were described as incidental rather than systematic. Under the theme of recommendations, teachers suggested the need for: (1) professional development in integrated teaching, (2) development of integrated teaching materials, (3) curriculum flexibility, and (4) collaboration among teachers from different subjects.

Table 5. Thematic Analysis of Teacher Interview Data

Theme	Sub-themes	Example Quotes
Recognition of Integration Potential	Local resources, Student engagement	"Banyuwangi has so much history and nature that students could learn from." (Teacher Interview, Biology-03)
Barriers to Integration	Training, Resources, Time,	"We don't have time to plan integrated lessons with the current schedule." (Teacher

Theme	Sub-themes	Example Quotes
Current Integration Practices	Curriculum	Interview, English-02)
	Incidental, Example-based	"Sometimes I use local examples, but it's not systematic." (Teacher Interview, History-05)
Recommendations	Training, Materials, Flexibility, Collaboration	"We need materials that combine history, environment, and English." (Teacher Interview, Biology-01)

Classroom observations conducted in 15 sessions revealed that very little integration of subjects occurred in regular teaching. In history classes, teachers primarily used lectures and textbook-based instruction, with limited use of local historical sources. In biology classes, teachers focused on textbook content with occasional references to local

environmental issues. In English classes, instruction focused on grammar and reading comprehension using generic texts rather than locally relevant content. Only two of the 15 observed sessions showed any meaningful integration across subjects, and these were in schools where teachers had received special training in integrated teaching approaches.

Table 6. Classroom Observation Results

Observation Aspect	History Classes	Biology Classes	English Classes
Use of local resources	Low	Low	Very Low
Student engagement	Moderate	Moderate	Low
Integration across subjects	Very Low	Very Low	Very Low
Use of active learning	Low	Low	Low
Connection to student life	Moderate	Moderate	Low

The analysis of student assignments (90 samples) revealed that students generally demonstrated limited ability to apply knowledge across disciplines. In history assignments, students showed basic factual recall but limited historical thinking skills. In biology assignments, students demonstrated knowledge of ecological concepts but limited connection to local contexts. In English assignments, students showed basic language skills but limited ability to express ideas about historical or environmental topics. Fewer than 10% of the assignments showed evidence of multidisciplinary thinking or application of knowledge from multiple subjects.

Discussion

The results of this study provide important insights into the state of historical, environmental, and English language literacy among senior high school students in Banyuwangi, as well as the relationships among these three types of literacy. The finding that all three literacy levels fall into the moderate to low categories is concerning and suggests that current educational practices are not adequately developing these essential competencies. This finding aligns with previous research in the Indonesian context, which has documented relatively low levels of literacy across multiple domains (Prasetyo, 2019; Suryani & Setyowati, 2021; Lie, 2020). The particularly low level of English language literacy is consistent with broader challenges in English language

education in Indonesia, where students often graduate with limited communicative competence despite years of instruction (Zein, 2022).

The significant positive correlations found among the three types of literacy provide empirical support for the argument that these literacies are interconnected and can be developed synergistically. The correlation between historical literacy and environmental literacy ($r = 0.524$) is particularly noteworthy, as it suggests that students who understand history are also more likely to understand environmental concepts. This finding supports the arguments made by Munggarani et al. (2023) and Nadilla et al. (2023) that local historical narratives can serve as meaningful resources for environmental education. The integration of local history and environmental education, as proposed by these researchers, appears to be a promising approach for developing both types of literacy simultaneously.

The correlation between historical literacy and English language literacy ($r = 0.418$) and between environmental literacy and English language literacy ($r = 0.462$) suggests that language skills are also connected to content knowledge. This finding supports the arguments of Rosmayanti (2023) and others who have advocated for integrating local content into English language teaching. When students learn English through locally relevant content, they may be more engaged and able to develop both language skills and content

knowledge simultaneously. The finding also suggests that students with stronger language skills may be better able to access historical and environmental knowledge, which is often mediated through texts and discourse.

The moderate strength of the correlations suggests that while the literacies are related, they are not identical constructs. Each type of literacy has unique components that require specific instructional attention. Historical literacy requires understanding of historical methods and thinking skills (Wineburg, 2018; Nokes, 2020). Environmental literacy requires knowledge of ecological systems and motivation for environmental action (Hollweg et al., 2021; Stevenson et al., 2022). English language literacy requires proficiency in vocabulary, grammar, and discourse (Cummins, 2021; García & Wei, 2022). Therefore, while integrated approaches are valuable, they should not replace targeted instruction in each discipline.

The student perception data revealing that environmental topics are perceived as most relevant while English is perceived as least relevant has important implications for teaching. Students' perception of relevance is a key factor in motivation and engagement (Keller, 2021; Ryan & Deci, 2020). The low perceived relevance of English may contribute to the low levels of English literacy observed in this study. However, if English instruction were integrated with locally relevant content—such as local history and environmental topics—students might perceive English as more relevant to their lives. This approach aligns with the principles of place-based education (Gruenewald, 2003; Sobel, 2004) and contextual learning (Crawford, 2001).

The qualitative findings from teacher interviews reveal that while teachers recognize the potential for integration, they face significant barriers. The lack of training in integrated teaching approaches is a major obstacle, consistent with research on teacher professional development in Indonesia (Rahmawati et al., 2023; Antoni et al., 2023). The curriculum constraints identified by teachers reflect the compartmentalized nature of the Indonesian education system, where subjects are taught separately with limited opportunities for integration. The limited availability of integrated teaching materials is another barrier, as teachers often lack resources that combine historical, environmental, and language content. These findings highlight the need for systematic support for teachers in developing integrated teaching approaches.

The classroom observation results showing very little integration across subjects are consistent with the teacher

interview findings. Despite the recognition of integration potential, actual classroom practice remains largely compartmentalized. This gap between recognition and practice is common in educational change, where awareness of the need for change does not always translate into changed practice (Fullan, 2020; Hargreaves & Fullan, 2022). The findings suggest that additional support—including professional development, resources, and curriculum flexibility—is needed to help teachers translate their recognition of integration potential into classroom practice.

The finding that fewer than 10% of student assignments showed evidence of multidisciplinary thinking highlights the limited development of this competency among students. This finding is particularly concerning given the emphasis on multidisciplinary competencies in the Merdeka Curriculum (Badan Standar, 2022). The Merdeka Curriculum emphasizes project-based learning, which has the potential to develop multidisciplinary skills. However, the findings of this study suggest that teachers may need additional support in implementing project-based learning in ways that genuinely integrate multiple subjects and develop multidisciplinary literacy.

The results of this study have important implications for curriculum development and instructional practice. First, the significant correlations among the three types of literacy provide empirical support for integrated teaching approaches. Schools should consider designing learning experiences that simultaneously develop historical, environmental, and language literacies through locally relevant topics. For example, a project on the history of Banyuwangi's natural resources could integrate historical research, environmental study, and English language presentation skills. Second, the low levels of literacy across all three domains suggest the need for more effective instruction in each area. Simply integrating subjects is not sufficient; each discipline must be taught with sufficient depth and rigor.

Third, the barriers identified by teachers suggest the need for systemic support for integration. This support could include: (1) professional development programs on integrated teaching approaches, (2) development of integrated teaching materials, (3) curriculum flexibility that allows for integration, and (4) structures for teacher collaboration across subjects. The importance of teacher collaboration is supported by research on professional learning communities and teacher collaboration (Hargreaves & Fullan, 2022; Vescio et al., 2020). When teachers from different subjects collaborate, they can develop integrated learning experiences that address

multiple learning objectives simultaneously.

The findings of this study also have implications for research on ethnopedagogy and place-based education. The positive relationships among the three literacies support the argument that locally grounded education can develop multiple competencies simultaneously. The ethnopedagogy framework, which emphasizes the integration of local wisdom into education, provides a useful theoretical lens for understanding how local history and environmental knowledge can be integrated into language instruction (Adinugraha, 2020; Oktavianti & Ratnasari, 2018). Future research should investigate how specific ethnopedagogical approaches can be used to develop historical, environmental, and language literacies.

The study also contributes to the growing body of research on education for sustainable development. The relationships among historical, environmental, and language literacies suggest that education for sustainable development should be multidisciplinary in nature. Understanding environmental issues requires historical understanding of how environmental problems developed, as well as the language skills to communicate about these issues across cultural and linguistic boundaries. This aligns with the UNESCO framework for Education for Sustainable Development, which emphasizes the importance of integrated approaches to learning (UNESCO, 2017).

The moderate correlations found in this study also suggest that while there is a relationship among the literacies, there are also unique aspects of each that require separate attention. Teachers should not assume that developing one type of literacy will automatically develop others. Instead, instruction should be intentionally designed to address each type of literacy while also making connections among them. This intentional approach is consistent with research on transfer of learning, which has shown that transfer does not happen automatically but must be explicitly taught (Perkins & Salomon, 2020; Barnett & Ceci, 2021).

The limitations of this study should be acknowledged. First, the study was conducted in a specific geographic context (Banyuwangi Regency), and the findings may not be generalizable to other regions of Indonesia. Future research should examine the relationships among literacies in different contexts. Second, the study relied primarily on quantitative measures of literacy, which may not capture the full complexity of literacy as a construct. Future research should incorporate more qualitative measures, such as analysis of student work and performance-based

assessments. Third, the study was cross-sectional in nature, which limits the ability to draw causal conclusions. Longitudinal research would be valuable for understanding how literacies develop over time and how interventions might affect them.

The findings of this study suggest several directions for future research. First, intervention studies should be conducted to test whether integrated teaching approaches can effectively improve multiple literacies simultaneously. Second, research should investigate the specific instructional strategies that are most effective for developing multidisciplinary literacy. Third, research should examine how teacher professional development can support the implementation of integrated teaching approaches. Fourth, research should explore how technology and digital tools can support integrated learning. Finally, research should investigate how the relationships among literacies vary across different student populations, such as students from different socioeconomic backgrounds or with different learning needs.

The findings also suggest practical recommendations for educators and policymakers. For teachers, the findings suggest the value of integrating local historical and environmental content into English language instruction, and vice versa. For school leaders, the findings suggest the need for structures and support that enable teacher collaboration across subjects. For policymakers, the findings suggest the need for curriculum flexibility and professional development that support integrated teaching approaches. The Merdeka Curriculum provides a policy framework that supports such approaches; however, additional support at the school and district levels may be needed for effective implementation.

CONCLUSION

This research successfully analyzed the levels of historical literacy, environmental literacy, and English language literacy among senior high school students in Banyuwangi, as well as the relationships among these three types of literacy. The findings reveal that students' literacy levels across all three domains are in the moderate to low categories, with English language literacy being the lowest. However, significant positive correlations were found among the three types of literacy, indicating that they are interconnected and can be developed synergistically. Students who perform well in one type of literacy tend to perform well in the others, suggesting that integrated teaching approaches that simultaneously address multiple literacies may be more effective than separate instruction in each discipline. The qualitative findings identified several barriers to integration, including

lack of teacher training, curriculum constraints, limited materials, and time constraints, which must be addressed to enable more effective integrated teaching.

The implications of this research are significant for educational practice and policy in Indonesia. First, the findings support the development of integrated teaching approaches that combine historical, environmental, and language learning through locally relevant topics. Second, the findings highlight the need for systemic support for teachers, including professional development, integrated materials, and structures for teacher collaboration. Third, the findings suggest that the Merdeka Curriculum's emphasis on project-based and contextual learning provides a supportive policy framework for integrated approaches, but additional support is needed at the implementation level. Future research should investigate the effectiveness of specific integrated teaching approaches and examine how teacher professional development can support the implementation of such approaches. Additionally, longitudinal research is needed to understand how literacies develop over time and how early interventions can support multidisciplinary literacy development.

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