



Literacy Barriers In Efforts To Develop Students' 21st-Century Skills

Lusiana Rahmatiani¹, Cecep Darmawan², Kokom Komalasari³, Rahmat⁴

^{1,2,3,4}Universitas Pendidikan Indonesia, Bandung, Indonesia



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ABSTRACT

This study explores the obstacles in implementing literacy habituation programs at SMPN 1 Tempuran and their implications for the development of students' 21st-century competencies, namely critical thinking, creativity, communication, and collaboration (4Cs). Employing a descriptive qualitative method, data were collected through observations, interviews, and documentation. The findings reveal that the literacy program, although structured through reading routines and digital resources, faces significant barriers such as inconsistent implementation, limited reading materials, low student motivation, and insufficient integration with collaborative learning. These issues hinder the development of higher-order thinking and communication skills. The study emphasizes the critical role of teachers as literacy facilitators and the need for contextual, reflective, and technology-integrated strategies to strengthen students' competencies in a globalized digital era. This research further identifies three broad categories of obstacles: personal (low motivation and reading interest), institutional (limited integration of literacy into lessons, lack of relevant reading resources, and minimal teacher involvement), and socio-cultural (weak family and community support). The novelty of this study lies in its comprehensive mapping of literacy barriers within a multidimensional framework that connects structural, pedagogical, and cultural factors to the 4Cs, integrating perspectives from multiple stakeholders. The implications contribute to the development of more effective, inclusive, and future-oriented school literacy policies aimed at equipping students with the skills required to thrive in a global and digital society.

INTRODUCTION

Technological advances and global social changes have brought about a paradigm shift in education. In the 21st century, education is no longer solely oriented toward cognitive achievement or content mastery but emphasizes the development of competencies relevant to contemporary demands. According to the Partnership for 21st Century Skills (P21), these competencies critical thinking, creativity, collaboration, and communication (4Cs) are essential for individuals to work, live, and contribute effectively in a globalized world (Alismail & McGuire, 2015).

In this context, literacy plays a central role as a foundation for developing 21st-century competencies. Literacy is understood not only as the ability to read and write technically, but also encompasses the ability to understand, evaluate, and use information to effectively solve life's problems. Over time, the concept of literacy has evolved into "multimodal literacy" or "21st-century literacy," encompassing digital literacy, information literacy, and media literacy (Lestari & Iryanti, 2024).

This type of literacy not only helps students understand texts but also develops higher-order thinking skills that underpin critical thinking and creativity.

In junior high school (SMP) learning, literacy habituation is a crucial strategy for instilling the habit of reading, reflective thinking, and structured writing. Activities such as 15 minutes of reading before class, daily journaling, book discussions, or utilizing digital libraries are all part of literacy habituation designed to build students'

familiarity with texts, both print and digital (Hasanah et al., 2025; P21, 2019). This habituation, when implemented consistently and contextually, is believed to develop communication skills, creativity in expressing ideas, and critical thinking regarding the information obtained (Alismail & McGuire, 2015).

Various studies support the role of literacy in developing 21st-century competencies. According to Bulut (2021), critical thinking skills can be trained through deep reading, evaluating arguments in texts, and writing fact-based opinions. Literacy also opens up space for students to think creatively through imaginative writing and problem-solving in social contexts (Fitriyani, Abdullah, & Hidayat, 2018). Reading and writing activities do not stand alone but rather form an organized structure of thought, language, and communication skills that are essential in today's workplace and social life (Yuliana & Kartiwi, 2020).

However, the implementation of literacy habits in schools still faces various obstacles. Many schools implement literacy programs administratively and ceremonially without a strong pedagogical strategy (Chourio-acevedo et al., 2023). Reading activities sometimes become meaningless routines, unaccompanied by reflection, discussion, or productive activities such as writing, presentations, or reading-based projects. According to Widodo and Wahyuni (2020), the biggest challenge in literacy habits is transforming literacy activities from routine activities to reflective activities integrated with cross-subject learning (Papagiannis & Pallaris, 2024).

On the other hand, literacy approaches that still focus on printed texts also hinder the development of digital and information literacy, which are essential components of 21st-century competencies (Nursaya'bani et al., 2025). A study by Kim et al. (2019) stated that 21st-century literacy education must integrate technology, the ability to sort digital information, and communication through online platforms. Without digital literacy, students will struggle to navigate the flood of information and become trapped by false information, misinformation, and manipulative narratives (Rahma Modeong et al., 2025; Zubaidah, 2020).

Successful literacy development must be interactive and participatory. In a collaborative learning environment, students not only read and write for themselves but also to share, present, and debate. This builds collaboration and communication competencies, which are essential foundations for teamwork and collective problem-solving. Stated that discussion-based literacy and group work can increase social awareness, active listening skills, and foster productive dialogue among students (Susanti & Krisdiana, 2021).

Literacy development and 21st-century competencies are closely linked. Literacy is the primary foundation for developing critical thinking, creativity, collaboration, and communication skills (Mardiana et al., 2025). In-depth reading activities, students are encouraged to understand texts analytically, evaluate arguments, and develop opinions based on data, all components of critical thinking skills (Nursaya'bani et al., 2025). Creative writing activities, group discussions, and presentations of reading findings also foster communication and collaboration among students, supporting these aspect (Bilici & Yilmaz, 2024a; Purnamasari, 2020). Furthermore, the development of digital literacy requires students to be able to sort information, identify reliable sources, and understand various types of media. This is part of information and media literacy, which falls within the framework of 21st-century skills (Musa, 2024). Therefore, a creative, collaborative, and contextually designed literacy habituation process can be an

effective strategy for building an academically and socially competent generation in the 21st century.

Given the crucial link between literacy habituation and 21st-century competencies, special attention is needed to address the barriers that arise in the practice of literacy habituation in schools (Lestari & Iryanti, 2024). These barriers can be structural (lack of reading materials, inadequate teacher training, limited digital access), pedagogical (non-contextualized literacy approaches), or cultural (lack of a reading culture at home and in the community).. Therefore, an in-depth study is crucial to determine the extent to which these barriers disrupt the process of strengthening students' 21st-century skills through literacy habituation in schools (Hasanah et al., 2025; Trilling & Fadel, 2009).

At the educational unit level, including at SMPN 1 Tempuran, literacy education has become a routine program. Activities such as 15 minutes of reading before class, providing reading corners in classrooms, and school literacy programs are part of strategies to increase reading interest. However, based on initial observations, the implementation of these literacy programs has not shown significant results in increasing students' reading interest or critical thinking skills. Many students still exhibit passive reading behaviors and have difficulty connecting the information they read to the broader learning context (Bilici & Yilmaz, 2024a; Lestari & Iryanti, 2024; Rahma Modeong et al., 2025).

Therefore, this study aims to identify and analyze the barriers to implementing literacy habituation programs at SMPN 1 Tempuran and to examine their implications for the development of students' 21st-century skills, particularly critical thinking, creativity, communication, and collaboration (4Cs) (Jatipamor, 2022). Specifically, the research seeks to categorize the types of literacy barriers into personal, institutional, and socio-cultural dimensions, map the relationship between these barriers and the 4Cs framework and propose strategic recommendations for more effective, inclusive, and future-oriented school literacy programs (Alismail & McGuire, 2015; Zubaidah, 2020). The findings are expected to contribute to the development of evidence-based policies and practices that strengthen students' competencies in the context of an increasingly globalized and digital society (Dewi et al., 2023).

RESEARCH METHOD

This study employed a descriptive qualitative design aimed at exploring the barriers to implementing literacy habituation programs and their implications for the development of students' 21st-century skills at SMPN 1 Tempuran.

1. Research Site and Participants

The research was conducted at SMPN 1 Tempuran, a junior high school located in Karawang Regency, West Java, Indonesia. Participants consisted of 2 teachers, students from grades VII, and the school literacy program coordinator. Teachers were selected purposively based on their direct involvement in literacy activities, while students were selected through stratified purposive sampling to represent different levels of reading interest and academic performance.

2. Data Collection Techniques and Instruments

Data were collected using three techniques:

- a. Observation: Non-participant classroom observations of literacy activities such as 15-minute reading, book discussions, and writing tasks. An observation checklist was used to record aspects of implementation, participation, and integration with collaborative learning.
- b. Interviews: Semi-structured interviews with teachers, students, and the literacy program coordinator. Interview guides were developed to explore perceptions of program effectiveness, encountered challenges, and suggestions for improvement.
- c. Documentation: Analysis of school literacy policy documents, program schedules, teacher lesson plans, and students' written outputs.

3. Data Analysis

Data were analyzed using Miles and Huberman's (1994) interactive model, which involves three concurrent activities:

- a. Data Reduction: summarizing and coding observational notes, interview transcripts, and documents into thematic categories (personal, institutional, and socio-cultural barriers).
- b. Data Display: organizing findings in narrative form and tabular matrices to facilitate interpretation.
- c. (3) Conclusion Drawing and Verification: synthesizing patterns, comparing findings with relevant literature, and validating through triangulation across data sources and member checking with participants.

RESULTS AND DISCUSSION

Results

The implementation of literacy habituation programs at SMPN 1 Tempuran has been formally structured through various activities, including a 15-minute reading session before class, the use of reading corners, the writing of literacy journals, and access to digital books via an online library. While these initiatives reflect the school's commitment to fostering literacy, the findings indicate that the actual impact on students' literacy engagement and 21st-century skills remains limited.

Observations showed that the 15-minute reading program was not carried out consistently across classes. In some classes, teachers initiated the session punctually, but in others, the activity was shortened or skipped due to time constraints. Teacher involvement during these sessions was minimal; most teachers simply instructed students to read without guiding post-reading reflections or discussions. As a result, opportunities for developing critical thinking skills through reflective questioning and analysis were missed. One student admitted during interviews, "I read, but I don't always understand the story. Sometimes we just close the book after time is up."

The school library and reading corners contained a limited and outdated collection of books. Many titles were not aligned with students' interests, such as novels or informational texts relevant to their age group. Students expressed that the lack of variety made reading less appealing, which in turn affected their creativity and

engagement. As one participant noted, “Most of the books are old and I’ve already read some of them. I wish there were more books about science and technology.”

Writing tasks, such as maintaining literacy journals or composing short essays, were not implemented regularly. Some teachers assigned writing activities only once every few weeks, and these were often treated as homework without follow-up feedback. This practice hindered the development of written communication skills, as students rarely had opportunities to refine their ability to articulate ideas in a structured and coherent manner.

Literacy activities were predominantly individual in nature. Collaborative formats such as group discussions, debates, or reading-based projects were rare. This limited the chance for students to develop collaboration and interpersonal skills. During interviews, several students expressed interest in discussing books with peers, with one remarking, “It would be more fun if we could talk about the books in groups and share our opinions.”

Teachers’ roles as literacy facilitators were constrained by heavy administrative workloads and a lack of professional development opportunities in literacy pedagogy (Mushfi et al., 2017). Few teachers had received training in integrating literacy into subject-based learning or in using technology to enhance literacy engagement. As a result, digital literacy—an essential component of 21st-century skills was not systematically incorporated into the literacy habituation program.

Overall, these findings reveal that the primary obstacles to effective literacy habituation are:

- (1) inconsistency in program implementation,
- (2) limited and unappealing reading resources,
- (3) underdeveloped reflective and collaborative practices, and
- (4) insufficient teacher facilitation and integration of digital literacy.

These barriers collectively hinder the holistic development of students’ 21st-century competencies, particularly critical thinking, creativity, communication, and collaboration. The main focus is to identify obstacles in literacy habits that impact the development of students’ 21st-century competencies. The following are the research findings presented in tabular form:

Table 1. Barriers to Literacy Habits and Their Impact on 21st Century Competencies

No	Literacy aspect	Obstacles Found	Impact on 21st-Century Competencies	Theoretical Analysis
1	Daily Reading Activities	Reading for 15 minutes before class is not consistent; teachers provide insufficient guidance.	Critical thinking does not develop optimally due to a lack of post-reading reflection.	Reflective literacy improves critical thinking skills (Bulut, 2021; Fitriyani et al., 2018).
2	Availability of Reading Materials	Limited, unvaried books, and unsuitable for students' interests	Low creativity and interest in reading	Access to diverse texts enhances imagination and innovation (Tang et al., 2020)
3	Writing Activities and Self-Expression	Writing journals or opinions is not routinely programmed	Written communication skills are not well developed	Written literacy encourages the ability to communicate ideas (Ananda & Fadhilaturrahmi, 2020)

No	Literacy aspect	Obstacles Found	Impact on 21st-Century Competencies	Theoretical Analysis
4	Collaboration in Literacy Activities	Students are rarely invited to discuss or engage in reading-based projects.	Low collaboration between students	Collaborative literacy develops social and teamwork skills (Widodo & Wahyuni, 2020; Alismail & McGuire, 2015)

The table above shows that the main obstacle to literacy habituation at SMPN 1 Tempuran is the lack of consistency and contextualization of literacy activities within students' learning lives. Routine reading activities are not accompanied by reflective strategies, thus students' critical thinking skills are not optimally developed. However, according to (Purnamasari, 2020; Trilling & Fadel, 2009). literacy activities combined with reflection can train students to analyze information, evaluate viewpoints, and form logical arguments all of which are part of critical thinking. The limited variety of reading materials also impacts students' low interest and creativity. The books available at school do not reflect the diversity of themes, genres, or cultures needed to develop imagination and the ability to generate new ideas (Spector et al., 2016). Literacy that relies on outdated, irrelevant, or boring texts is certainly ineffective in developing students' innovative competencies. On the other hand, digital literacy has not been optimally developed. Digital literacy is a crucial component of 21st-century literacy, directly related to the ability to sort information, filter out hoaxes, and think logically about online content (P21, 2019). However, students and teachers have not received the training or resources to independently develop digital literacy. As a result, students are more accustomed to passively consuming social media rather than exploring quality digital learning resources (Karyani, 2024).

The lack of programmed writing activities, such as journals, book reviews, or blogs, also hinders the development of written communication skills. According to (Bilici & Yilmaz, 2024a) writing activities can help students organize ideas, express opinions, and develop argumentative skills. If these activities are not regularly facilitated, students will struggle to articulate their ideas clearly and logically.

The collaborative aspect is also absent from literacy activities. Literacy activities conducted individually, without group work, discussions, or presentations, fail to develop social competencies such as empathy, cooperation, and listening skills (Alismail & McGuire, 2015; rahma modeong et al., 2025). Collaborative learning through literacy, such as collaborative writing projects, group debates, or reading discussions, can be a means of strengthening students' soft skills.

Finally, the role of teachers as 21st-century literacy facilitators is not yet optimal. Teachers who are still focused on administrative tasks tend to lack the time and strategies to develop creative and contextual literacy approaches. Literacy should be embedded as part of a pedagogical strategy, not simply as a supplementary activity (Alismail & McGuire, 2015).

Discussion

The findings of this study show that the obstacles to literacy acquisition at SMPN 1 Tempuran are not merely technical issues in program implementation, but rather reflect interrelated structural, pedagogical, and cultural challenges. Within the

framework of the Partnership for 21st Century Skills (P21, 2019) and studies on 21st-century literacy (Lestari & Iryanti, 2024; Zubaidah, 2020) literacy should serve as the foundation for the development of critical thinking, creativity, communication, and collaboration. However, the low consistency of implementation, limited reading materials, lack of reflective-collaborative activities, and weak integration of digital literacy indicate that the literacy process has not been transformed into a learning strategy oriented toward the 4Cs.

From a theoretical perspective, these findings reinforce (Trilling & Fadel, 2009) view that 21st-century literacy requires an interdisciplinary, integrative, and technology-based approach. Barriers in the personal dimension (low motivation) are directly related to self-determination theory, which emphasizes the importance of autonomy, competence, and relatedness in building reading. Barriers in the institutional dimension, such as limited resources and insufficient teacher training, align with the findings of (Spector et al., 2016) that the success of school literacy is greatly influenced by institutional support and teachers' pedagogical capacity (Bilici & Yilmaz, 2024b). Meanwhile, barriers in the socio-cultural dimension indicate that a literacy culture cannot be built solely in schools but requires the involvement of families and communities.

The results of this study emphasize the need for strategic steps at the school level, such as: Transforming literacy practices from administrative routines into reflective processes through discussions, creative assignments, and collaborative reading-based projects. Expanding and updating the collection of reading materials relevant to students' interests, including educational literature on science, technology, and popular culture. Providing ongoing training for teachers on integrating literacy across all subjects and utilizing technology to develop students' digital literacy.

At the educational policy level, the following are needed: The development of school literacy implementation standards that link achievement indicators to the development of 21st-century skills. Special budgetary support for the provision of diverse reading materials, the updating of literacy facilities, and the strengthening of teacher capacity. Sustainable partnerships between schools, families, and communities to build a literacy ecosystem that is adaptive to the digital age. Thus, the barriers identified in this study are not merely technical challenges but reflect the need for a paradigm shift in literacy toward integrated, collaborative, and relevant learning practices aligned with 21st-century demands.

Implemented through routine programs such as 15 minutes of reading before class, utilizing reading corners, writing literacy journals, and introducing digital books through online libraries. However, the effectiveness of these programs remains limited because they have not fully formed reading habits or increased students' interest in literacy (Lestari & Iryanti, 2024). Based on observations and interviews, many students lack strong reading motivation and have difficulty expressing reading comprehension orally or in writing. Literacy in schools is a fundamental aspect in strengthening students' character and 21st-century skills. Literacy is no longer defined narrowly as the ability to read and write alone, but has evolved into a set of skills for accessing, understanding, evaluating, and communicating information from various sources. In today's digital era, the need for literacy is increasing along with the rapid development of information technology, which presents a flood of data and information. Therefore, literacy instillation is a strategic step in fostering students' critical thinking, creativity,

collaboration, and communication skills—the four main pillars of 21st-century competencies (Alismail & McGuire, 2015; Mardiana et al., 2025). The concept of 21st-century skills has become increasingly important in educational discourse, particularly in the context of preparing students to navigate an ever-changing, globalized, and digital world. These skills are generally categorized into four core competencies often referred to as the 4Cs: critical thinking, creativity, communication, and collaboration (Alismail & McGuire, 2015). These competencies are interrelated and serve as essential tools for problem-solving, innovation, and lifelong learning.

Critical thinking is widely recognized as the foundation of effective decision-making. It involves the ability to analyze, evaluate, and synthesize information in order to make reasoned judgments. In educational contexts, students who develop critical thinking skills are better equipped to address complex problems, question assumptions, and navigate conflicting perspectives. According to (Mardiana et al., 2025) critical thinking enables learners to avoid misinformation, assess credibility, and formulate sound arguments, all of which are essential in the information-rich digital age.

Creativity, as a complementary skill, emphasizes the capacity to generate original ideas, adapt to new situations, and find novel solutions to challenges. (Parmini et al., 2023) argue that creative thinking nurtures resilience and flexibility, which are crucial in dynamic work environments. In the classroom, fostering creativity can be achieved through inquiry-based learning, artistic expression, and opportunities for independent exploration.

Collaboration refers to the ability to work effectively with others toward a common goal. This includes shared responsibility, active listening, empathy, and the ability to resolve conflicts constructively. In a globalized world, students must learn to collaborate across cultural and linguistic differences. A collaborative learning fosters mutual respect and enhances students' interpersonal skills, which are vital in both academic and professional spheres (Alismail & McGuire, 2015; Papagiannis & Pallaris, 2024; Parmini et al., 2023).

Communication, the final core competency, involves the clear and coherent exchange of ideas through verbal, written, and digital means. Effective communication encompasses not only the transmission of information but also the capacity to listen, interpret, and respond appropriately (Siregar et al., 2023; Wahyu, mardaning, n.d.). In the context of 21st-century learning, communication extends to digital literacy and media awareness, enabling students to convey messages responsibly across various platforms.

Beyond the 4Cs, 21st-century skills also include digital literacy, global awareness, leadership, and adaptability. These expanded competencies reflect the demands of a knowledge-based economy and a highly interconnected world. (Alismail & McGuire, 2015; Chourio-acevedo et al., 2023) emphasize the importance of integrating these skills into school curricula through interdisciplinary projects and authentic learning experiences. By doing so, educators can equip students with the mindset and tools required to thrive in uncertain futures.

In summary, the framework of 21st-century skills underscores the shift from content acquisition to skill development. Education systems must prioritize learning experiences that promote higher-order thinking, creativity, collaboration, and communication. Through deliberate instructional strategies and supportive learning

environments, schools can prepare students not only to succeed academically but also to contribute meaningfully to society (Hakim, 2024; Siregar et al., 2023).

Literacy habits in schools can be realized through various approaches, ranging from regular morning reading activities, creative writing programs, book discussions, and project-based learning. (Bilici & Yilmaz, 2024a; Lestari & Iryanti, 2024) explain that project-based literacy models can improve students' critical thinking skills because they are required to analyze reading content, reflect on it, and express their findings in written work or presentations. In this context, literacy habits are not merely academic activities, but also a means of developing personality and an open mindset. One important dimension of today's literacy habits is digital literacy. Digital literacy encompasses the ability to use information technology effectively, ethically, and productively to access and produce information. (Bilici & Yilmaz, 2024a; Papagiannis & Pallaris, 2024; Parmini et al., 2023) emphasize that teachers have a central role in guiding students to become critical, selective, and responsible technology users. Digital literacy also supports the creation of a collaborative and contextual learning ecosystem, enabling students to collaborate on projects, engage in discussions through digital platforms, and develop ideas creatively.

To address these challenges, school policy support and ongoing teacher training are needed. (Milara & Orduña, 2024) emphasize the importance of teacher professional development in digital literacy and literacy-based pedagogy. Schools also need to create learning environments that support a culture of literacy, such as providing reading corners in every classroom, establishing reading communities, and facilitating technology-based literacy. Through this approach, literacy habits become not just routine but part of a transformative learning system. Overall, literacy habits in schools play a crucial role in preparing students to face global challenges and the era of disruption. Literacy not only supports academic achievement but also fosters social sensitivity, reflective thinking, and the ability to adapt to change. Therefore, literacy habits must be a priority in curriculum design and school culture to create a generation of lifelong learners with strong competitiveness and character.

The integration of literacy into all subjects is highly recommended to prevent it from being fragmented into a mere supplementary activity. (Zubaidah, 2020) state that literacy-based contextual learning can foster higher-order thinking skills because students are exposed to real-life situations that require problem-solving, decision-making, and logical argumentation (Maulana, 2022). Literacy activities such as reading scientific texts, analyzing graphs, or writing reflective essays across various subjects can hone students' analytical and synthetic skills.

Furthermore, cultivating literacy habits is also closely linked to strengthening character and social competence. Literacy programs that involve teamwork, such as book discussions or collaborative writing, can improve communication and collaboration skills. According to (Alismail & McGuire, 2015; Papagiannis & Pallaris, 2024; Wan Mohd Nasir et al., 2024) collaborative reading in groups not only strengthens comprehension of reading content but also fosters the habit of listening to and respecting others' opinions. This aligns with the Pancasila values of student learning, which emphasize mutual cooperation, critical thinking, and effective communication. Despite the significant benefits of literacy education, its implementation in schools still faces various challenges (Wan Mohd Nasir et al., 2024) noted that the limited availability of varied and engaging reading materials is often a major obstacle.

Furthermore, not all teachers possess adequate digital literacy competencies, resulting in suboptimal use of technology for literacy activities (Kristiyani, 2023). In many cases, literacy education is merely implemented as a formal administrative activity without a meaningful pedagogical approach.

This finding is highly relevant when linked to the theory of 21st-century skills (Dzaki & Salsabila, 2024). According to (Trilling & Fadel, 2009) 21st-century skills consist of three main categories: (1) life and career skills, (2) learning and innovation skills (4Cs: critical thinking, communication, collaboration, creativity), and (3) information, media, and technology skills. All of these categories require a strong literacy foundation. For example, critical thinking and problem-solving skills cannot be developed without the ability to comprehend information deeply, evaluate arguments, and draw logical conclusions—all of which begin with reading habits and functional literacy (Zubaidah, 2020). This low interest in reading aligns with Rahim's (2018) findings, which state that one of the major challenges in literacy culture is students' perception of reading as boring and irrelevant to their lives. Furthermore, (Liu et al., 2014) emphasized that students' interest in reading is greatly influenced by the diversity of reading materials, the relevance of topics to their world, and the support of their environment, both at school and at home (Bilici & Yilmaz, 2024a; Purnamasari, 2020).

On the other hand, obstacles were also identified internally within schools, particularly in the role of teachers and literacy program management. Interviews with several teachers revealed that some were unable to systematically integrate literacy activities into the learning process (Lestari & Iryanti, 2024; Purnamasari, 2020; Trilling & Fadel, 2009). However, literacy is not solely the responsibility of language teachers but must be a cross-subject approach. This aligns with (Purnamasari, 2020) opinion, which states that 21st-century skills cannot develop without comprehensive literacy integration into the learning process. Teachers play a crucial role in linking literacy to the development of critical thinking, communication, collaboration, and creativity—the four main components of 21st-century skills (Lestari & Iryanti, 2024).

From a managerial perspective, obstacles also arise from the lack of a structured monitoring and evaluation system for student literacy development. Literacy programs operate without measurable achievement targets, making their success difficult to objectively evaluate (Kristiyani, 2023; Mardiana et al., 2025). Effective literacy programs require comprehensive planning, implementation, and evaluation (Milara & Orduña, 2024). Furthermore, the lack of training and mentoring for teachers in developing 21st-century skills-based literacy further exacerbates the disparities in implementation in the field.

Barriers to literacy are also inseparable from external factors, particularly students' family and social environments. Interviews with several parents revealed that most of them lack a reading habit at home. Book collections are very limited, and there is virtually no time to accompany their children in reading activities. This finding strengthens the argument that developing a culture of literacy requires collaboration between schools and families (Lestari & Iryanti, 2024). Furthermore, a social environment that encourages digital media consumption rather than a reading culture also weakens literacy habits among students.

Furthermore, field observations indicate that literacy activities are still routine and administrative, without being followed up with reflective or productive activities. For example, the 15-minute reading activity before class is not always accompanied by

discussions or creative reading-based assignments. As a result, literacy activities do not sufficiently challenge students' thinking. According to strengthening higher-order thinking skills can only occur if students are encouraged to analyze, evaluate, and create products or solutions from the information they read.

21st-century skills, as outlined by the Framework for 21st Century Learning (P21, 2019), strongly emphasize the importance of integrating content knowledge with complex thinking skills. Literacy cannot be separated from active, collaborative, and contextual learning processes. Unfortunately, in the context of SMPN 1 Tempuran, not many literacy programs have been developed in this direction. Project-based literacy learning, reading group discussions, and reflective writing based on reading are still rare. This indicates a lack of transformation of the literacy approach from mere habits to pedagogical strategies for developing competencies. The development of literacy skills in educational settings is inextricably linked to the cultivation of 21st-century competencies, as literacy redefined to encompass not only the ability to read and write but also to access, evaluate, interpret, and ethically communicate information in diverse formats serves as the foundation for nurturing critical thinking, creativity, communication, and collaboration, which are the core attributes required for students to succeed in the complexities of a globalized, digital, and innovation-driven world.

Furthermore, the digital literacy gap is also a barrier. On some occasions, schools provide reading materials in digital format, but many students are less accustomed to accessing and reading long texts on mobile screens. They are more accustomed to short visual content such as short videos or social media. This leads to (Trilling & Fadel, 2009) 8calls "fragmented literacy," where students are accustomed to processing information quickly and superficially, rather than deeply and reflectively. This situation certainly contradicts the goals of 21st-century education, which requires students to be active, critical, and intelligent digital information literate learners (Milara & Orduña, 2024). School principals and teachers also acknowledge that there is no specific training that encourages teachers to develop creative literacy approaches based on 21st-century competencies. Teacher professional development activities still focus on meeting administrative burdens or technical curriculum implementation. This underscores the importance of systemic support from education offices and local governments to provide ongoing training relevant to strengthening a culture of literacy and global skills. Therefore, this discussion confirms that barriers to literacy habits do not exist in isolation but are the result of an accumulation of issues at the individual, institutional, and social levels. Making literacy the foundation of 21st-century skills requires a transformation from simply reading to reflective, creative, and collaborative learning practices that involve the entire educational ecosystem.

Education.

Overall, the obstacles to literacy development at SMPN 1 Tempuran can be categorized into three main dimensions: (1) the personal dimension, namely low student motivation and interest in reading; (2) the institutional dimension, namely the weak integration of literacy into learning and suboptimal program management; and (3) the socio-cultural dimension, namely the lack of support from the family and community. These three dimensions are interrelated and have a direct impact on hindering the development of students' 21st-century skills, particularly in critical thinking, expressing ideas in writing, collaborating in literacy discussions, and structuring thoughts creatively. These findings reinforce the importance of literacy

development as an essential strategy in developing a literate and globally competent generation. Literacy is not only a learning tool but also a foundation for 21st-century life skills. Therefore, a holistic and contextual approach to literacy is needed, involving teachers, school management, parents, and the community as strategic partners in creating a vibrant and sustainable literacy ecosystem.

CONCLUSION

This study shows that the literacy program at SMPN 1 Tempuran is not yet optimal in supporting the development of students' 21st-century skills, particularly critical thinking, creativity, communication, and collaboration (4Cs). The identified obstacles are divided into three main dimensions: (1) Personal dimension, namely low motivation and interest in reading among students; (2) Institutional dimension, including limited integration of literacy into learning, lack of relevant reading materials, and the suboptimal role of teachers and school management in designing and evaluating literacy programs; and (3) Socio-cultural dimension, characterized by a lack of family support and low public awareness of the importance of literacy culture. These obstacles are interrelated and significantly hinder the internalization of 21st-century skills in students.

Although it provides a comprehensive picture of the obstacles to literacy habits, this study has several limitations. First, the scope of the study only covers one school, so the generalization of the findings to other school contexts is still limited. Second, the methods used are descriptive qualitative, so they are unable to quantitatively measure the extent of each obstacle's influence on the development of the 4Cs. Third, this study has not explored in depth regional or national policy factors that may influence the success of literacy programs.

For future research, it is recommended to conduct comparative studies across schools or regions to examine variations in obstacles and successful literacy strategies. A mixed-methods approach can be used to combine in-depth qualitative analysis with more objective quantitative measurements. Additionally, future research should explore innovative technology-based interventions, school-family-community collaboration models, and analyses of literacy education policies that directly impact the strengthening of 21st-century skills.

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***Lusiana Rahmatiani**

Civic Education, Indonesian University of Education,
Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia
Email: lusiana@upi.edu

Cecep Darmawan

Civic Education, Indonesian University of Education,
Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia
Email: cecep.darmawan@upi.edu

Kokom Komalasari

Civic Education, Indonesian University of Education,
Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia
Email: kokom.kumalasari@upi.edu

Rahmat

Civic Education, Indonesian University of Education,
Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia
Email: rahmat@upi.edu
