



Strengthening Indonesian Language Literacy through PHBS Education at Kabanjahe Advent Private Senior High School

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Abstract

Low reading interest and literacy skills among senior high school students are often accompanied by limited awareness of Clean and Healthy Living Behavior (Perilaku Hidup Bersih dan Sehat/PHBS) in the school environment. This community service activity aimed to strengthen Indonesian language literacy among students of SMA Swasta Advent Kabanjahe through a PHBS education approach integrated with reading activities and inspirational story-writing training. The program combined lectures, interactive discussions, structured literacy activities, and creative writing workshops involving tenth-grade students. A one-group pre-test–post-test design was employed to evaluate changes in students' PHBS knowledge, complemented by content analysis of their written works. The findings demonstrated a substantial improvement in students' understanding of PHBS following the intervention, accompanied by a marked reduction in the proportion of students with low levels of knowledge. In addition, the program resulted in a collection of inspirational stories reflecting students' understanding and internalization of PHBS values. These findings suggest that integrating literacy development with health education provides an effective and engaging learning strategy that can be replicated in other schools while supporting the implementation of the School Literacy Movement (Gerakan Literasi Sekolah/GLS) and school-based health promotion programs.

Keywords: indonesian language literacy; phbs; inspirational story writing; reading movement; school health promotion.

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Introduction

Indonesian language literacy is a foundational ability that enables students to access, understand, evaluate, and communicate various types of information, including health-related information. Literacy skills encompass not only the ability to read and write but also the capacity to think critically, interpret information, and apply knowledge in everyday life (Organisation for Economic Co-operation and Development (OECD, 2019). However, national literacy assessment results indicate that reading and writing skills among senior high school students in Indonesia still require improvement, particularly in critically comprehending texts and organizing ideas into coherent written forms. Findings from the Programme for International Student Assessment

(PISA) consistently show that Indonesian students perform below the OECD average in reading literacy, indicating the need for innovative literacy-based learning strategies (OECD, 2023).

At the same time, Clean and Healthy Living Behavior (Perilaku Hidup Bersih dan Sehat/PHBS) is one of the priority health promotion programs implemented in Indonesian schools. PHBS aims to encourage individuals and school communities to adopt healthy behaviors through practices such as washing hands with soap, consuming healthy snacks, using clean latrines, disposing of waste properly, avoiding smoking in school environments, and engaging in regular physical activity (Ministry of Health of the Republic of Indonesia, 2016). Developing healthy behaviors during adolescence is essential because habits formed during this stage often persist into adulthood and contribute to long-term health outcomes (WHO, 2021). Nevertheless, limited health literacy and low awareness of PHBS among students may increase the risk of communicable diseases and unhealthy lifestyles in the school environment.

Preliminary observations conducted at SMA Swasta Advent Kabanjahe revealed that PHBS education was primarily delivered through conventional short lectures, which were less effective in fostering sustained awareness and behavioral change. Health education is generally more effective when learners actively engage in constructing knowledge and reflecting on personal experiences rather than passively receiving information (UNESCO, 2021). Several situational issues were identified, including low student interest in reading nonfiction materials, especially health-related texts; limited opportunities to practice reflective writing; PHBS education that remained separated from literacy activities; and the absence of attractive PHBS-themed reading materials designed for adolescents.

To address these challenges, the service team developed an educational model integrating Indonesian language literacy strengthening with PHBS education through a school literacy movement and inspirational story-writing training. Reading activities enable students to acquire knowledge about healthy behaviors, while writing inspirational stories encourages them to reflect upon, internalize, and communicate health messages using proper Indonesian language. Writing has been recognized as an effective learning strategy for strengthening comprehension, reflection, and knowledge retention (Graham, Kiuhara, & MacKay, 2020). Moreover, integrating literacy with health education can improve both literacy competence and health literacy simultaneously, thereby supporting the development of lifelong healthy behaviors (Nutbeam, 2008). Therefore, this community service activity aimed to: (1) increase students' knowledge and awareness of PHBS through a literacy-based educational approach; (2) foster students' reading interest and habits using health-themed reading materials; (3) enhance students' writing skills by

composing inspirational stories containing PHBS messages; and (4) produce a collection of student-written inspirational stories that can serve as educational media for promoting healthy behaviors within the school community.

Method

The target participants of this community service program were students of SMA Swasta Advent Kabanjahe, located in Kabanjahe District, Karo Regency, North Sumatra Province. Participants were selected using purposive sampling based on their availability, willingness to participate, and representation of the target educational level to ensure the effectiveness of the literacy intervention (Creswell & Creswell, 2018). A total of 30 tenth-grade students participated throughout the program. The program was implemented over approximately one month, from 7 June to 7 July 2026, at SMA Swasta Advent Kabanjahe. This duration allowed students to experience repeated literacy activities and gradual reinforcement of PHBS concepts through reading, writing, and reflection. Integrating literacy activities with health education over an extended period is considered more effective than one-time health promotion sessions because repeated exposure facilitates knowledge retention and behavioral internalization (WHO, 2021; Nutbeam, 2008).

The educational intervention adopted a participatory learning approach by combining several instructional methods, namely lectures, interactive discussions, a structured literacy movement, creative writing workshops, and individual as well as group mentoring. The lecture sessions introduced fundamental concepts of Clean and Healthy Living Behavior (PHBS), while interactive discussions enabled students to clarify misconceptions and share their daily experiences regarding healthy behaviors. Subsequently, students participated in a structured reading movement using PHBS-themed reading materials specifically designed for adolescents. Reading activities were intended to strengthen students' comprehension and health literacy while simultaneously cultivating reading habits in accordance with the objectives of school literacy programs (UNESCO, 2021). Following the reading sessions, students attended an inspirational story-writing workshop. During this stage, participants learned the basic structure of inspirational narratives, including orientation, conflict, resolution, and moral messages, while integrating PHBS values into their stories. Writing activities encourage students to organize ideas systematically, develop critical thinking, and reinforce conceptual understanding through reflection (Graham et al., 2020). Throughout the writing process, facilitators provided continuous mentoring to assist students in improving story organization, language use, creativity, and the accuracy of PHBS messages.

Program effectiveness was evaluated using a mixed-method approach that combined quantitative and qualitative assessments. Quantitatively, a one-

group pre-test–post-test design was employed to determine changes in students' knowledge regarding PHBS before and after the educational intervention (Campbell & Stanley, 1963). This design is widely used in educational and community service research to measure learning outcomes resulting from an intervention. Qualitative evaluation focused on assessing students' written products through content analysis. Students' inspirational stories were analyzed to identify how well PHBS concepts had been understood, interpreted, and communicated in narrative form. Content analysis enables researchers to systematically evaluate written documents based on predefined categories and themes (Krippendorff, 2018).

Several evaluation instruments were employed throughout the program. A PHBS knowledge questionnaire was administered before and after the intervention to measure knowledge improvement. Student participation during literacy and educational activities was documented using an observation sheet. The quality of inspirational stories was evaluated using a rubric covering four assessment dimensions: (1) relevance of the PHBS theme, (2) narrative structure and coherence, (3) accuracy of Indonesian language usage, and (4) clarity of the moral message delivered. In addition, students completed a feedback questionnaire to evaluate their learning experiences, satisfaction with the activities, and perceived benefits of integrating literacy with health education.

Table 1. *stages of activity implementation*

No	Activity Stage	Time	Description
1	Coordination and permission with the school	Week I	Service team & Principal
2	Preparation of PHBS educational materials and reading resources	Week I	Service team
3	PHBS knowledge pre-test	Week II	All participants
4	PHBS socialization and education	Week II	Lecture, discussion, Q&A
5	Reading movement on PHBS-themed materials	Week II-III	Structured literacy activity
6	Inspirational story writing training	Week III	Writing workshop
7	Mentoring for students' writing composition	Week III-IV	Individual/group mentoring
8	PHBS knowledge post-test	Week IV	All participants
9	Presentation and exhibition of student works	Week IV	Publication of results
10	Evaluation and report preparation	Week IV	Service team

Result and Discussion

Overview of Activity Implementation

The community service activity was carried out according to the planned stages, starting from coordination with the school, PHBS education, the reading movement, inspirational story-writing training, up to the final evaluation. The entire series of activities received a positive response from both the school and the students, as reflected in the high attendance rate and active participation of participants throughout the program.

Pre-Test and Post-Test Results of PHBS Knowledge

The evaluation results of students' PHBS knowledge before and after the education activity are presented in Table 2.

Table 2. *comparison of students' PHBS knowledge category, pre-test and post-test*

Knowledge Category	Pre-Test (Number of Students)	Post-Test (Number of Students)
Good	7	21
Fair	14	8
Poor	9	1
Total	30	30

Based on the table above, the number of students in the "good" knowledge category increased from 7 students (23%) at pre-test to 21 students (70%) at post-test. Conversely, the number of students in the "poor" category decreased from 9 students (30%) to 1 student (3%) after participating in PHBS education, the reading movement, and inspirational story-writing training. This improvement indicates that the applied approach was effective in increasing students' understanding of Clean and Healthy Living Behavior.

Results of Students' Inspirational Story Writing

The writing activity produced a number of PHBS-themed inspirational stories composed by students. In general, the themes raised by students included personal experiences with handwashing habits, awareness of maintaining school environmental cleanliness, invitations to peers to live healthily, and reflections on the importance of a nutritious diet.

Discussion

The results of this community service program demonstrate that the integrative approach combining Clean and Healthy Living Behavior (PHBS) education, the School Literacy Movement (Gerakan Literasi Sekolah/GLS), and inspirational story writing contributed positively to improving students' understanding of PHBS. Integrating health education with literacy activities encouraged students not only to receive information through conventional lectures but also to actively construct knowledge by reading, reflecting, discussing, and expressing their understanding through writing. Active

learning approaches are known to enhance comprehension and long-term knowledge retention because students become directly involved in the learning process rather than acting solely as passive recipients of information (UNESCO, 2021; WHO, 2021). The literacy activities also increased students' engagement with health-related reading materials. During the structured reading movement, students showed greater interest in nonfiction texts because the materials were presented in language appropriate to their age and directly related to their daily lives. Previous studies have shown that contextual reading materials improve reading motivation and facilitate meaningful learning experiences, particularly when learners can relate the content to real-life situations (OECD, 2023). Through repeated reading and discussion sessions, students gradually developed a better understanding of healthy lifestyle practices such as proper handwashing, healthy eating habits, environmental cleanliness, regular physical activity, and smoke-free school environments.

The inspirational story-writing workshop further strengthened students' literacy competencies. Students learned to organize ideas systematically by developing story elements such as orientation, conflict, resolution, and moral messages while incorporating PHBS values into their narratives. Writing activities encourage learners to synthesize information, reflect on personal experiences, and communicate ideas effectively using appropriate language. According to Graham et al. (2020), writing is not merely a means of assessment but also an effective learning strategy that enhances conceptual understanding and critical thinking. The stories produced by students indicated that most participants were able to connect PHBS concepts with everyday situations, demonstrating meaningful internalization of health messages. Another important outcome of the program was the development of educational products in the form of students' inspirational stories. These stories can serve as school-based health promotion media that are more relatable to fellow students because they are written from adolescents' perspectives using familiar language and experiences. Such peer-generated educational materials have the potential to complement conventional health promotion strategies by making health messages more engaging and easier to understand. This finding is consistent with the concept of health literacy, which emphasizes not only acquiring health information but also the ability to interpret, communicate, and apply health knowledge in everyday life (Nutbeam, 2008). Overall, the findings indicate that integrating literacy strengthening with health education provides dual educational benefits. Besides improving students' awareness and knowledge of PHBS, the program simultaneously enhanced reading habits, reflective thinking, and writing skills. These outcomes support the implementation of the Indonesian School Literacy Movement (GLS), which encourages schools to integrate literacy practices across different subject areas and learning activities (Ministry of Education, Culture, Research, and

Technology, 2021). Therefore, literacy-based health education represents an innovative and sustainable strategy for promoting healthy behaviors while simultaneously strengthening students' literacy competencies.

Supporting and Inhibiting Factors

Several supporting factors contributed to the successful implementation of this community service program. First, strong support from the principal and teachers of SMA Swasta Advent Kabanjahe facilitated coordination, scheduling, and student participation throughout the activities. Institutional support is widely recognized as an essential component in the successful implementation of school-based health promotion programs (WHO, 2021). Second, students demonstrated high enthusiasm and active participation during the reading movement, discussions, and creative writing workshops. Their willingness to engage in interactive learning activities created a positive learning atmosphere and encouraged collaborative knowledge construction. Third, the availability of attractive PHBS-themed reading materials specifically designed for adolescents helped maintain students' interest in reading while improving their understanding of health concepts. Educational materials that are relevant to learners' contexts are generally more effective in promoting literacy development and meaningful learning (UNESCO, 2021).

Despite these positive outcomes, several challenges were encountered during implementation. The primary constraint was the limited duration of the program, which coincided with the school's regular academic schedule and reduced the amount of time available for mentoring and revision of students' writing. In addition, students demonstrated varying levels of writing proficiency. Some participants were able to develop coherent and creative narratives independently, whereas others required more intensive guidance in organizing story structures, using appropriate Indonesian language, and integrating PHBS messages effectively. This variation reflects differences in students' literacy competencies, highlighting the need for differentiated mentoring and continuous literacy support within schools (OECD, 2023). Future programs should consider extending the implementation period and providing follow-up mentoring sessions so that students have greater opportunities to refine their writing skills while reinforcing healthy behavioral practices.

Conclusion

The activity to strengthen Indonesian language literacy based on PHBS education through a reading movement and inspirational story writing at SMA Swasta Advent Kabanjahe was successfully carried out according to the planned stages. There was an improvement in students' knowledge of Clean and Healthy Living Behavior (PHBS) after participating in the series of education, reading, and writing training activities. The story-writing activity

produced a number of PHBS-themed student works that can be used as supplementary health education media in the school environment. Overall, the integration of literacy and health education proved able to increase students' active engagement compared to conventional education methods, and the model is recommended for adoption as a routine, replicable program integrated with the School Health Unit (UKS) and School Literacy Movement (GLS).

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