



The Big Questions and Bookmark Organizers Strategy for Enhancing Students' Reading Literacy in Elementary Schools

Chandra^{1*}, M Habibi¹, Annisa Kharisma²

¹ Universitas Negeri Padang, Indonesia

² Universitas Adzkia, Indonesia

*Corresponding Author: 1chandra@fip.unp.ac.id

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Abstract

Teachers' ability to design effective reading literacy materials is essential to help students comprehend texts and foster positive attitudes toward reading. However, many teachers still face challenges in developing such materials, which often results in students' difficulties in understanding texts. This study aims to develop reading literacy materials based on the Big Questions and Bookmark Organizers strategy for fourth-grade elementary students that meet the criteria of validity, practicality, and effectiveness. The research employed the Plomp development model, consisting of self-evaluation, expert review by three specialists, and prototype testing. Initial testing was conducted through one-to-one evaluation with students at Public Elementary School 46 Kuranji, followed by small-group and field test evaluations at Public Elementary School 06 Padang Besi to examine practicality. Effectiveness testing was carried out through field test evaluation at Public Elementary School 01 Sawahan. The results indicated that the developed materials achieved a validity score of 3.82, categorized as highly valid. Practicality reached 95.25 percent, classified as highly practical, as shown by the implementation of lesson plans, as well as positive responses from teachers and students. Furthermore, the materials demonstrated effectiveness through students' active engagement, improvement in reading skills, development of positive attitudes, and better critical thinking outcomes. In conclusion, the Big Questions and Bookmark Organizers-based reading literacy materials for fourth-grade elementary students were proven to be valid, practical, and effective, and thus hold potential for broader application in enhancing reading instruction at the elementary level.

Keywords *Reading literacy; BQBO strategy; material development*

INTRODUCTION

Reading is widely recognized as a fundamental literacy competence that enables learners to construct meaning from written texts and transform comprehension into creative language production (Abidin, 2012; Chandra et al., 2022). This process integrates visual, perceptual, and conceptual dimensions, requiring interpretation and critical thinking. Beyond linguistic mastery, reading plays a central role in learners' intellectual, social, and emotional development, serving as the foundation for academic success across disciplines. The importance of reading literacy is emphasized in the Regulation of the Minister of Education and Culture Number 23 of 2015, which promotes fifteen-minute daily reading activities before classroom learning as part of a nationwide literacy movement. This initiative highlights the urgency of equipping learners with strong reading literacy skills to enhance their global competitiveness.

In the context of reading literacy, comprehension is a key component that encompasses skills, strategies, processes, and the nature of texts employed (Chandra, Habibi, et al., 2021; UNESCO, 2005). Effective comprehension requires proper techniques—such as silent reading, avoiding head or finger movement, and focusing on extracting meaning rather than word-by-word



decoding (Chandra et al., 2024; Saddhono & Slamet, 2012). Instructional practices that align with these techniques must include structured phases of pre-reading, while-reading, and post-reading (Chandra et al., 2023; Somadayo, 2011), supported by relevant and comprehensible texts. Reading materials should therefore be designed with accessible language, age-appropriate themes, and motivating content that fosters deeper engagement and understanding.

Teachers, as the primary agents of classroom learning, play a decisive role in shaping reading literacy instruction in line with the National Education Standards (Government Regulation No. 19 of 2005). Their ability to plan lessons, deliver instruction, and prepare effective teaching materials is a determining factor in learners' literacy outcomes. According to Muhid, comprehension can be fostered through activities such as recognizing text types, predicting content, summarizing, identifying implicit information, and analyzing vocabulary in context (Chandra, Rahman, et al., 2021; Muhid et al., 2020). However, existing practices in Indonesian elementary schools often reveal limitations. Needs analysis conducted in Grade IV classrooms in Padang between March 21 and April 2, 2016, showed that available materials inadequately represented literacy processes. Instruction frequently relied on surface-level questioning without meaningful pre-reading or collaborative engagement (Chandra, 2022; Triplett, 2002). Furthermore, ineffective reading techniques persisted, contributing to low comprehension levels—a problem reflected in international assessments such as PISA 2006, which reported Indonesian students' reading performance below global standards (Alwasilah, 2012).

Additional challenges were identified in the quality of post-reading activities. Instructional resources generally limited post-reading to individual question-and-answer tasks, with questions often failing to capture the essence of the text. The researcher's analysis further confirmed that maximum achievement of Basic Competency requirements reached only 51.85% in government-provided textbooks. Moreover, the texts used in practice were rigidly tied to certain printed sources that were not sufficiently relevant to learners' daily lives, resulting in low interest, difficulty in retelling, and minimal communication between students and teachers. Prior research underscores that collaborative dialogue during reading is crucial to long-term literacy success, yet many students remain disengaged due to unappealing reading materials (Ngaka & Masaazi, 2015).

To overcome these limitations, innovative instructional strategies are required. One promising approach is the Big Questions and Bookmark Organizers (BQBO) strategy, which combines pre-reading focus through Big Questions with post-reading comprehension reinforcement via Bookmark Organizers (Bromley et al., 1999). The BQBO sequence—Ask Questions, Make Connections, Visualize Reading, Discussion, and Self-Monitor and Clarify—guides learners through active engagement at each stage of reading. This integration strengthens critical thinking, encourages independent reasoning (Drapeau, 2008), and positions learners as active constructors of meaning rather than passive recipients of information.

Based on these considerations, the present study aims to develop reading literacy teaching materials for Grade IV elementary school students by applying the Big Questions and Bookmark Organizers strategy, with the expectation that such an approach will address existing limitations and contribute a novel, effective model for enhancing reading comprehension and engagement in elementary education.

LITERATURE REVIEW

The concept of reading literacy has been extensively explored within large-scale international assessments, most prominently PISA. PISA conceptualizes reading literacy as the ability of learners to utilize written information in everyday contexts, both within and beyond the school environment (Thomson et al., 2013). More specifically, it is defined as the capacity to understand, use, reflect on, and engage with written texts in order to achieve personal goals,

broaden one's knowledge, and actively participate in society (Thomson & De Bortoli, 2012). This perspective moves beyond the narrow focus on decoding symbols and literal comprehension, emphasizing instead the integration of higher-order processes such as reflection, critical engagement, and strategic application of reading skills.

The PISA framework elaborates reading literacy into five key components: understanding, using, reflecting, engaging with, and interacting with a variety of written texts (Thomson et al., 2013). Each component highlights the multidimensionality of reading literacy—ranging from meaning-making and practical application to motivational engagement and the interpretation of diverse text types, including narrative, expository, and document-based materials. In doing so, PISA underscores that literacy is not simply a cognitive process but also a social practice that involves individual agency and participation.

The development of reading literacy has been recognized as most effective when nurtured from childhood through quality education (Unesco, 2014). At the primary and secondary school levels, literacy goals extend beyond basic decoding to include the use of reading as a tool for learning and critical engagement with content. (PIRLS, 2015) identifies four central purposes for reading: enjoyment, learning, engaging in literary experiences, and acquiring information. Notably, the digital assessment ePIRLS places particular emphasis on reading for information acquisition, reflecting the growing importance of online texts in contemporary learning contexts. This dual recognition of reading for both personal fulfillment and academic advancement suggests that literacy education must balance intrinsic motivation with functional skills. A critical implication for research is how instructional practices can align these dual purposes, ensuring that learners not only gain pleasure from reading but also acquire strategies for knowledge construction.

Building on these goals, PISA describes reading literacy across three dimensions: *text* (range and format of materials), *aspect* (types of processes involved), and *situation* (contexts of engagement). Similarly, (Peña-López, 2012) emphasizes that literacy is constituted by the interplay of purpose, material, and cognitive approach. (UNESCO, 2014) extends this framework by identifying four domains: reading skills, contextual application of texts, reading processes, and text types. Within this structure, comprehension emerges as both a skill and a process. Learners must employ specific strategies before, during, and after reading to achieve deep understanding. Effective texts are those that allow learners to practice summarizing, evaluating arguments, identifying generalizations, and establishing relationships between elements of the text (PIRLS, 2015). In addition, the selection of texts plays a pivotal role in literacy development. (Leonhardt & Abdurrahman, 1999) highlights the importance of providing diverse reading materials—from optimistic family stories to mysteries, science fiction, and realistic narratives—while (Geske & Ozola, 2008) demonstrate that exposure to such varied texts can significantly enhance reading performance.

A growing body of literature also underscores the link between reading literacy and critical thinking. Critical thinking is conceptualized as reflective and productive reasoning that requires evaluation of evidence (Santrock, 2011) and the pursuit of reliable knowledge (A. Jensen & Bergqvist, 2011; S. H. Jensen, 2019). When embedded within reading instruction, critical thinking supports learners' ability to analyze arguments, assess credibility, and draw sound conclusions (Suprananto, 2012). Scholars argue that reading instruction should not merely focus on comprehension at the surface level but must also cultivate evaluative and analytical skills. By framing reading as an inquiry process, learners are encouraged to interrogate texts, consider alternative perspectives, and justify their interpretations—skills essential for higher-order literacy.

Pedagogical approaches to reading also highlight the role of silent and intensive reading practices. Silent reading, which engages both visual memory and eye movement, enables learners to acquire information efficiently and fosters vocabulary growth and literary familiarity (H.G.

Tarigan, 2008; Taufina, 2015). Intensive reading, typically carried out in classroom contexts, involves close examination of short texts with the aim of developing deep comprehension and critical review (Taufina & Chandra, 2017). These approaches align with the broader goal of literacy education: equipping learners with strategies for comprehension at multiple levels. Intensive reading, in particular, reinforces the value of guided instruction in which learners engage deeply with texts through structured activities and scaffolded questioning.

Scholars consistently emphasize the importance of structured reading processes, typically organized into pre-reading, while-reading, and post-reading stages (Abidin, 2012; Rahim, 2011; Somadayo, 2011). Pre-reading activities, such as making predictions, activating prior knowledge, and stimulating interest through multimodal cues, prepare learners for engagement. While-reading emphasizes effective strategies such as silent reading, avoiding subvocalization, and processing in meaningful units rather than word-by-word. Post-reading involves synthesizing new information with existing knowledge, engaging in reflective discussion, retelling, dramatization, or applying learning outcomes (Burns et al., 2016; Muhammadi et al., 2018). Taken together, these stages reflect a cyclical process of preparation, engagement, and reflection, which collectively support higher levels of comprehension. For researchers, this framework highlights the need to investigate not only what texts are used but also how instructional design can scaffold learners' active participation in meaning-making.

RESEARCH METHOD

This study employed a research and development (R&D) approach, also referred to as design research, with the aim of developing an instructional product. The development model adopted was the Plomp model, which is adapted from McKenney's framework. The Plomp model consists of three phases: (1) preliminary research, (2) prototyping, and (3) assessment (Plomp, 2013).

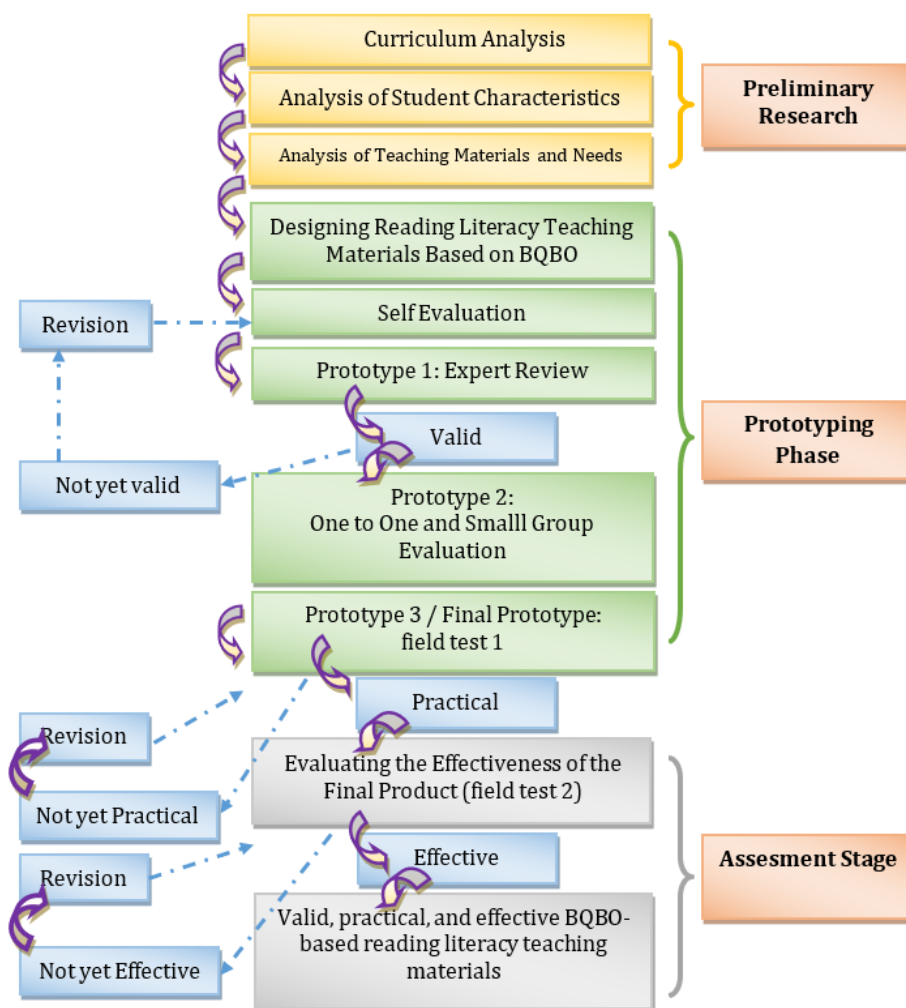


Figure 1. Modified Research Procedure Flowchart from Plomp Model

In the preliminary research phase, a needs analysis, curriculum analysis, and an investigation of student characteristics were conducted. The subsequent prototyping phase involved designing the product, which was then reviewed by a teacher through classroom trials. Expert validation was carried out to ensure the product's quality, and feedback from experts was incorporated into revisions. The revised product was then tested through individual and small-group evaluations, followed by classroom trials in selected schools. During these trials, observations focused on the practicality and usability of the instructional materials. Further revisions were made based on feedback from teachers and observers, after which the product was tested at SD Negeri 01 Sawahan to evaluate its effectiveness. At the final stage, responses from both teachers and students were collected, and the effectiveness of the instructional materials was measured (Plomp, 2013).

The study generated both qualitative and quantitative data. Qualitative data were obtained through interviews, observations, and field notes, while quantitative data were collected using questionnaires, observation sheets, and learning achievement tests. The trial subjects were fourth-grade students from SD Negeri 46 Kuranji (Kuranji District), SD Negeri 06 Padang Besi (Lubuk Kilangan District), and SD Negeri 01 Sawahan (Padang Timur District), all located in Padang City.

The data collection instruments were aligned with the developed instructional materials and included questionnaires, interview guides, and observation sheets. All instruments were validated by three experts prior to use. In addition, students' critical thinking skills were assessed during the learning process, focusing on three aspects: (1) formulating questions, (2) analyzing arguments,

and (3) drawing conclusions. Data analysis covered validation results, practicality trials, and effectiveness testing. Descriptive statistics were applied to analyze test scores, observation sheets, and questionnaires, while descriptive qualitative analysis was used to examine interview findings.

FINDINGS AND DISCUSSION

Findings

The findings of the research on the development of reading literacy teaching materials based on the BQBO strategy for fourth-grade elementary students are presented in this chapter. Referring to the developmental stages described in Chapter 3, the results are categorized into three phases: the Preliminary Research, the Prototype Phase, and the Assessment Stage.

Preliminary Research

The preliminary research stage involved an analysis of the current curriculum, the need for teaching materials in the field, and student characteristics. The needs analysis focused on two main aspects, namely text content and design (layout and editorial quality). The curriculum analysis covered learning outcomes, concepts, and tasks, while the learner analysis was conducted to ensure the appropriateness of the developed materials with students' developmental stages.

The analysis of learning outcomes served as the foundation for formulating learning objectives and designing the conceptual framework of the material. Concept analysis guided the determination of key elements in teaching reading skills for fourth graders. In the first semester, the content included main ideas, usage instructions, and word meanings. These concepts were arranged systematically and sequentially so that each supported the others in the learning process. The development of reading literacy materials was aligned with the stages of reading—pre-reading, while-reading, and post-reading. Neglecting any of these stages may result in overlapping or ineffective material delivery. For instance, omitting the pre-reading stage would prevent students from identifying essential ideas in the text or focusing on its content, thus hindering the achievement of reading objectives.

The main idea is defined as the central concept of a paragraph, typically expressed in the topic sentence, which may appear at the beginning or the end of a paragraph. Each paragraph contains only one main idea, also referred to as the key idea or central thought.

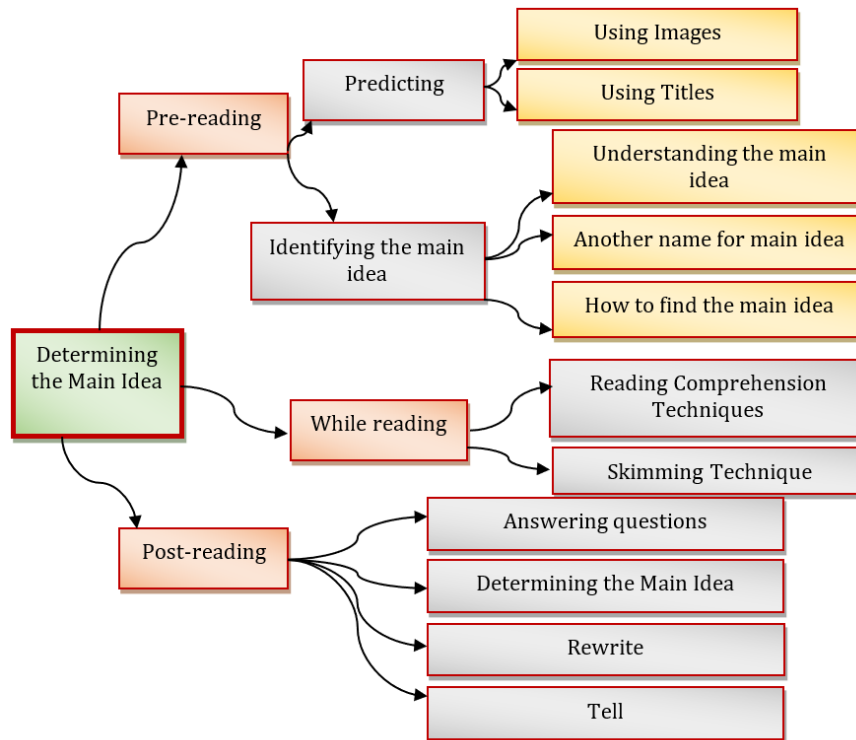


Figure 2. Concept Map of Material on Determining Main Ideas

The needs analysis aimed to identify essential aspects required to achieve effective learning, with particular emphasis on the usability of teaching materials in practice. Hence, the focus was directed toward assessing learners' needs regarding the materials employed in the classroom.

Students' reading preferences were classified into three categories of stories: folktales, legends, and children's stories. The data indicated that 7 students preferred folktales, 6 students favored legends, and 8 students enjoyed children's stories. Since the differences in preference were not substantial, all three categories were incorporated into the teaching material development.

In the folktale category, fables were selected as a narrative type featuring animal characters. The findings showed that students favored 11 types of animals, including cats, rabbits, tigers, mousedeer, butterflies, grasshoppers, monkeys, dogs, horses, chickens, and elephants. Among these, cats (14 students) and rabbits (13 students) were the most preferred, followed by butterflies (2 students), while the other animals were favored by only one student each. Consequently, the developed materials featured rabbit and butterfly characters. Rabbits were chosen due to their high popularity, whereas butterflies were included to introduce students to this animal type. Further data revealed that 19 out of 21 students preferred rabbits, with only two students indicating otherwise. White rabbits were the most favored in terms of color preference.

In response to students' learning needs, the researcher developed reading literacy teaching materials based on the BQBO strategy, as previously outlined. These materials were designed by integrating the essential components of reading literacy with the BQBO strategy, thereby providing a structured representation of reading literacy instruction aimed at achieving the intended learning objectives.

Prototype Phase

Following the needs analysis, interviews, and observations conducted during the preliminary stage, the next step was to design and develop a prototype of reading literacy teaching materials

based on the BQBO strategy. The prototype was specifically designed for one semester of reading competencies and was developed in four stages: initial draft, prototype 1, prototype 2, and prototype 3. Before being submitted to experts for validation, the teaching materials were revised by a teacher. This step ensured that errors in the initial draft could be identified and corrected so that the version given to the experts was of higher quality. The revision process was guided by a *self-evaluation* instrument.

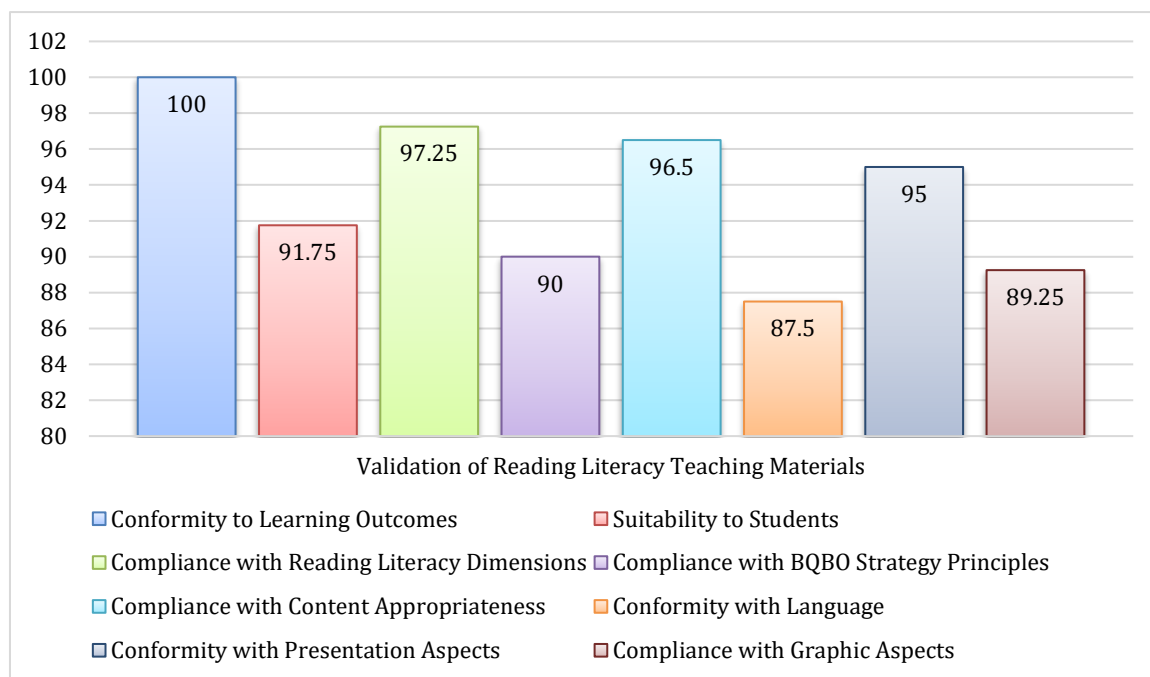


Figure 3. Validation of Reading Literacy Teaching Materials

1. Validation

The validation results demonstrate that all assessed learning outcomes were rated in the *highly valid* category. For the first learning outcome, the teaching material was judged highly valid, as it effectively facilitates students in identifying the main ideas within extended texts. This finding indicates that the material is well-suited to strengthening reading comprehension skills. For the second learning outcome, the validation also yielded a highly valid rating, suggesting that the material is relevant for supporting students in carrying out tasks based on written instructions. This confirms the material's role in promoting functional reading skills through practical application. Regarding the third learning outcome, the highly valid result signifies that the material appropriately supports students in developing scanning skills to accurately and efficiently extract information from reference sources. Taken together, the three learning outcomes were consistently categorized as highly valid, thereby confirming that the teaching material fully aligns with the demands of the learning outcomes and is suitable for classroom use without requiring substantial revision.

The validation results provide empirical evidence that the developed teaching material demonstrates a high degree of alignment with the developmental characteristics of learners. The predominance of the *highly valid* category across multiple developmental domains confirms that the material has been systematically and pedagogically structured to correspond with students' physical, intellectual, linguistic, emotional, and social needs. The average score, categorized as *highly valid*, indicates that the material not only satisfies the minimum standards of educational feasibility but also ensures comprehensive support for holistic learner development. These findings

contribute to affirming the robustness of the material in fostering balanced growth, thereby reinforcing its suitability for classroom implementation with only minor modifications, if required.

The validation results reveal that all dimensions of reading literacy were rated in the *highly valid* category. For the text dimension, the teaching material was considered highly valid as it presents texts that are appropriate for fostering deeper reading comprehension. This indicates that the material has been designed with attention to text quality, relevance, and readability. In the aspect dimension, the highly valid rating demonstrates that the material accommodates the essential literacy skills required, ranging from understanding explicit information to interpreting implicit meanings. Similarly, in the situational dimension, the teaching material was also rated highly valid, signifying that the learning contexts it provides are relevant to students' needs and encourage active engagement in reading activities. Overall, these findings affirm that the teaching material aligns comprehensively with the three dimensions of reading literacy, thereby validating its use in classroom practice without the need for substantial revision.

The validation results show that the teaching material is predominantly categorized as *highly valid* in several indicators, such as questioning, visualizing reading, and self-monitoring, indicating that these components are well-integrated and pedagogically sound. Meanwhile, indicators classified as merely *valid*, particularly in connection-making and discussion, suggest that certain elements of the strategy still require refinement to maximize their effectiveness. Overall, the results confirm that the teaching material has achieved a high level of validity, demonstrating both theoretical robustness and practical feasibility for classroom application, with only minor adjustments needed to strengthen the less optimal components.

2. Practicality

The practicality questionnaire for the reading literacy teaching materials based on the BQBO strategy was administered to two teachers of Grade IV at Public Elementary School 06 Padang Besi, Lubuk Kilangan District, Padang City. The practicality questionnaire was also administered to 22 fourth-grade students of Public Elementary School 06 Padang Besi, Lubuk Kilangan District, after the learning process using the reading literacy teaching materials based on the BQBO strategy.

The teaching material was considered appealing in terms of both its overall design and the choice of colors, which made the content more engaging. The learning process became more enjoyable as the material was connected to real-life situations. The instructions provided in the book were clear and easy to follow, while the inclusion of illustrations supported students in deepening their understanding of the content. The use of this material also encouraged active participation, which enhanced learning activities and enabled students to grasp the subject matter more effectively.

In addition, the students were trained to formulate questions, share them, and discuss the answers with their peers. The book guided them in practicing silent reading, fostered positive attitudes through the stories presented, and encouraged more critical thinking about the meaning of the texts. The learning steps were organized in a systematic manner, making them easy to follow, and the tasks provided could be completed within the allocated time.

Furthermore, students were given opportunities to express the knowledge they had acquired. Their understanding of the material improved significantly after completing the evaluation exercises included in the book.

Assessment Phase

The assessment of reading skills was conducted to evaluate students' comprehension of the texts they read. This evaluation was implemented through test items designed in accordance with

the content of the passages. The assessment instruments were incorporated into the lesson plans and the developed teaching materials. The test consisted of ten multiple-choice questions, five short-answer items, and four essay questions.

The determination of learning mastery was based on the established minimum mastery criteria. Individual student achievement was evaluated through the results of formative tests, which were then compared with the minimum mastery criteria set for each class where the trial was conducted.

Table 1. Uji N-Gain

Class	Statistic	Std. Error		
NGain_PersenExperiment	Mean	57.8580	3.37345	
	95% Confidence Interval Lower Bound for Mean	50.1887		
	Upper Bound	63.7273		
	5% Trimmed Mean	57.7068		
	Median	57.1459		
	Variance	603.148		
	Std. Deviation	24.55907		
	Minimum	.00		
	Maximum	100.00		
	Range	100.00		
	Interquartile Range	39.16		
	Skewness	-.389	.327	
	Kurtosis	-.377	.644	
	Control	Mean	16.9768	2.03195
		95% Confidence Interval Lower Bound for Mean	14.6994	
Upper Bound		22.8542		
5% Trimmed Mean		17.9358		
Median		16.6750		
Variance		218.826		
Std. Deviation		14.79278		
Minimum		.00		
Maximum		57.15		
Range		57.15		
Interquartile Range		17.47		
Skewness		.559	.327	
Kurtosis		-.174	.644	

The calculation of the N-Gain score revealed that the average score of the experimental class, which utilized the BQBO-based teaching module, was 57.8580 and fell into the moderate category. In contrast, the control class, which applied the conventional module, obtained an average N-Gain score of 16.9768, categorized as low. These findings indicate that the reading literacy module developed with the BQBO strategy was effective in enhancing students' reading literacy skills, whereas the conventional module was not effective in fostering the development of students' reading literacy abilities.

Discussion

The development of reading literacy teaching materials based on the BQBO strategy, adapted from the Plomp development model, was successfully carried out. The materials were tested with

students from several elementary schools. The prototype trial using the one-to-one evaluation method was conducted at Public Elementary School 46 Kuranji, Kuranji District. The prototype trial employing the small group evaluation and the first field test evaluation was implemented at Public Elementary School 06 Padang Besi, Lubuk Kilangan District. Meanwhile, the prototype trial with the second field test evaluation was conducted at Public Elementary School 01 Sawahan, Padang Timur District.

In the practicality stage using the one-to-one evaluation method, two Grade IV students from Public Elementary School 46 Kuranji, Kuranji District, were involved. The subsequent practicality test was conducted at Public Elementary School 06 Padang Besi, Lubuk Kilangan District, with twenty-two Grade IV students through the small group evaluation and the first field test evaluation. The effectiveness stage using the second field test evaluation was carried out with twenty-eight Grade IV students at Public Elementary School 01 Sawahan, Padang Timur District, Padang City. The findings of this development research are presented in greater detail, particularly with regard to the validity, practicality, and effectiveness of the developed teaching materials.

Validation is considered a crucial step in development research, as it ensures that the product being developed possesses accuracy, truth, and legitimacy. In the context of teaching materials, content validity reflects the extent to which the material represents current knowledge and established standards, while construct validity indicates that the components of the product are consistent and theoretically aligned. Plomp emphasized that valid instructional materials must embody the “state of the art knowledge” as a dimension of content validity and demonstrate internal consistency among their components as evidence of construct validity (Plomp, 2013).

In the research on reading literacy materials based on the Big Questions and Bookmark Organizers (BQBO) strategy, content validity was confirmed through expert judgment, which indicated that the teaching material aligned with the reading curriculum for grade IV and addressed authentic literacy demands. Construct validity was also established, as the structure and formulation of the module complied with academic standards and pedagogical principles of teaching material development. Data analysis of expert validation yielded an average score of 3.82, which falls into the “highly valid” category. This finding suggests that the developed materials are consistent with the official curriculum, the formulated learning indicators, and the cognitive development of students.

These findings are consistent with recent studies. For instance, Suwarti reported that interactive multimedia teaching materials based on Problem-Based Learning were rated as “very valid” in both content and construct aspects, achieving an average validity of over 90% (Suwarti et al., 2019). Similarly, Agustina demonstrated that the critical thinking skill test instrument for ecology lessons achieved high content validity, with Aiken’s V coefficients ranging from 0.75 to 1.00, indicating strong agreement among experts regarding relevance, construction, and clarity (Agustina et al., 2023). Furthermore, Lukitasari confirmed the construct validity of a digital literacy skills instrument through confirmatory factor analysis, which revealed strong factor loadings (~ 0.80) and high reliability (0.94) (Lukitasari et al., 2022).

Therefore, the conclusion that BQBO-based reading literacy teaching materials are highly valid in terms of both content and construct validity is not only supported by internal validation data but also aligns with broader empirical findings in the field of instructional material development. Content validity demonstrates that the materials are relevant and comprehensive, while construct validity ensures that the structure and indicators form a coherent and logical framework for supporting reading literacy learning.

Validation alone is not sufficient to ensure the quality of instructional materials; practicality is also a crucial aspect. Practicality refers to the extent to which teachers and students can easily

and effectively use reading literacy teaching materials based on the BQBO strategy in the learning process. Plomp emphasizes that instructional materials can be considered practical if they can be utilized smoothly by both teachers and learners without creating significant obstacles (Plomp, 2013). To evaluate this aspect of practicality, the present study conducted trials with fourth-grade students at SD Negeri 46 Kuranji and SD Negeri 01 Sawahan.

The findings of this study are reinforced by previous research that highlights the importance of practicality in determining the effectiveness of instructional materials. Meisani revealed that teachers require alternative teaching resources in the form of printed, audio, and electronic modules that are not only content-valid but also easy for students to use independently (Meisani, 2021). The design of the modules, such as color combinations and variations in content presentation, was found to significantly influence perceptions of practicality. Furthermore, Puspita reported that an English teaching material model for primary school teacher candidates received highly positive evaluations from expert validation, small-group trials, and field trials (Puspita & Rosnaningsih, 2020). Their study demonstrated that the materials were not only valid in terms of content but also practical for implementation in real classroom settings.

The analysis of student response questionnaires indicated that the BQBO-based reading literacy teaching materials facilitated learners' ability to comprehend texts in their entirety. The materials were designed with visual features such as appealing color gradients and alignment with learners' developmental characteristics. Student responses confirmed that the materials were practical to use, offered clear readability, and were easy to understand during the learning process. These findings are reinforced by Dai, who highlighted that text readability has a direct impact on students' capacity to grasp content meaning (Dai & Liu, 2024). Similarly, Caputo emphasized that the combination of text and background colors enhances visual comfort and strengthens readability perception, which in turn promotes text comprehension (Caputo et al., 2023).

Further evidence is provided by international studies. Wilson in their systematic review underscored that typography and text legibility are essential components influencing instructional effectiveness (Wilson et al., 1981). Baper reported that appropriate color contrast reduces cognitive load and improves material retention (Baper et al., 2021). In addition, Jalel demonstrated that variations in digital material colors positively affect visual comfort and readability, thereby supporting learners' comprehension (Jalel et al., 2023). Taken together, these findings suggest that the integration of textual readability, visual design, and developmental appropriateness makes BQBO-based reading literacy teaching materials effective in enhancing students' reading comprehension skills.

An instructional material can be considered effective when it generates a positive impact on the achievement of learning objectives. Indriawati emphasized that learning effectiveness is characterized by the attainment of instructional goals, the creation of engaging learning experiences, the active involvement of students, and the availability of adequate facilities (Indriawati et al., 2021). These principles are reinforced by recent empirical studies. Merisuo-Storm demonstrated that picture-based activities significantly improve children's reading comprehension, including literal, interpretive, and evaluative aspects, compared to the control group (Merisuo-Storm & Soininen, 2011). Similarly, Zou reported that elementary students who engaged in picture-supported reading outperformed those who relied solely on textual input (Zou & Teng, 2023).

In the present study, the effectiveness of reading literacy materials based on the BQBO strategy was examined after ensuring their validity and practicality, with learning outcomes and student activities serving as indicators. The findings revealed that the use of pictures during the pre-reading stage enables students to make richer and more complete predictions (in multiple

sentences), enhances motivation, and activates cognitive readiness, compared to predictions based solely on the title.

Furthermore, the consistent implementation of group discussion activities was found to foster both character development and critical thinking skills. Gasmi confirmed that small group discussions enhance learning engagement, critical thinking abilities, and student motivation in language learning contexts (Gasmi & Al Nadabi, 2023). This aligns with a recent study in India, which showed that critical thinking skills—particularly inductive and deductive reasoning—are strong predictors of reading comprehension success, even after controlling for decoding and vocabulary skills. Therefore, the integration of picture-based pre-reading predictions, active reading phases, group discussions, and peer correction is theoretically and empirically supported as an effective approach to enhance students' comprehension, motivation, character, and overall literacy competence.

CONCLUSIONS

This study developed reading literacy teaching materials for fourth-grade elementary students by applying the Big Questions and Bookmark Organizers (BQBO) strategy and found that the materials met the criteria of validity, practicality, and effectiveness. Expert validation confirmed alignment with curriculum demands and learner characteristics, while practicality testing revealed that teachers and students considered the materials engaging, accessible, and easy to use. Effectiveness testing further indicated significant improvements in students' reading comprehension, motivation, and active participation compared to conventional materials. Beyond addressing limitations of existing practices such as surface-level questioning and minimal collaborative engagement, the integration of BQBO facilitated prediction, connection, visualization, discussion, and self-monitoring, thereby fostering comprehension, critical thinking, and character development. Theoretically, these findings reinforce the importance of structured reading strategies combined with multimodal supports, contributing to literacy theory by demonstrating the interdependence of prediction, questioning, and reflection, while extending the applicability of BQBO to early literacy contexts. Practically, the study provides teachers with an empirically tested and adaptable instructional model that promotes learner-centered practices and peer collaboration, while also offering policymakers and curriculum developers a research-based framework to strengthen national literacy initiatives and address persistent challenges in elementary reading comprehension.

LIMITATION & FURTHER RESEARCH

Despite these promising outcomes, the study has several limitations that open avenues for further research. First, the sample was limited to a single grade level and specific school context, which may restrict the generalizability of the findings. Second, the study primarily measured short-term gains in reading comprehension and student engagement, leaving long-term effects on literacy development unexplored. Future research should involve larger and more diverse samples across multiple grade levels and cultural contexts to test the broader applicability of the BQBO strategy. Longitudinal studies are also recommended to examine sustained impacts on reading proficiency, critical thinking, and character formation. Additionally, integrating digital tools into BQBO-based materials could be investigated to address contemporary shifts toward digital literacy and blended learning environments. By addressing these limitations, subsequent studies can further refine and expand the contributions of BQBO in enhancing literacy education.

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