

DEVELOPING INDONESIAN LANGUAGE TEACHING MATERIALS BASED ON THE MIME MODEL: A LESSON FROM IT'S VALIDITY, PRACTICALITY, AND EFFECTIVENESS

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Article Info	Abstract
Article History Received: April 2026 Revised: May 2026 Accepted: June 2026 Published: July 2026	<i>The growing demand for advanced literacy skills requires reading instruction at the junior high school level to move beyond surface comprehension toward integrative, analytical, and reflective reading practices. However, Indonesian language instruction remains largely dependent on conventional teaching materials that do not systematically integrate extensive and intensive reading strategies. This study aimed to develop Indonesian language teaching materials based on the Integrative Extensive–Intensive Reading (MIME) model to enhance students' reading comprehension and text analysis skills. This research employed a R&D approach. Data were collected through classroom observations, interviews, document analysis, expert validation sheets, student response questionnaires, and reading comprehension tests. The study involved Indonesian language teachers and students at Malang, East Java, with 30 students participating in the limited field trial. The developed materials were evaluated by subject matter experts, instructional design experts, and graphic design experts before being implemented in an experimental class and compared with a control class to examine their effectiveness. The validation results indicated that the developed teaching materials achieved a very high level of validity. Effectiveness testing revealed a statistically significant difference between the experimental and control groups ($p = 0.003 < 0.05$). These findings demonstrate that the MIME-based teaching materials are valid, practical, and effective in improving students' reading comprehension, text analysis skills, and learning engagement. Practically, the developed teaching materials can serve as an alternative instructional resource for Indonesian language teachers to implement integrative reading instruction and strengthen students' higher-order literacy skills at the junior high school level.</i>
Keywords Learning materials; Indonesian teaching; MIME learning model; Reading strategies;	
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INTRODUCTION

Reading skills are one of the main foundations of Indonesian language learning at the junior high school level (Carrel, 1997). Through reading activities, students not only learn to understand the content of a text, but also learn to think, interpret meaning, and build logical reasoning. Therefore, reading skills greatly determine students' success in understanding information, analyzing texts, and expressing ideas accurately (Rofifah, 2020; Suwartini & Fujiastuti, 2017). If reading skills are weak, then almost the entire learning process at school

will be affected, because most academic information is conveyed through written texts (Panjaitan et al, 2025).

However, the reality in Indonesian classrooms indicates that students' reading proficiency remains below the expected level (Haryani et al., 2024). Many students continue to experience difficulties in identifying main ideas, interpreting implicit meanings, drawing logical inferences, and synthesizing information across texts. Their reading practices are often limited to locating explicit information rather than engaging in deeper processes of interpretation, critical reflection, and meaning construction. Consequently, students are less able to evaluate arguments, relate textual information to prior knowledge, or formulate evidence-based conclusions. This condition suggests that reading instruction has not yet fully fostered higher-order thinking skills, particularly inferential, analytical, and evaluative comprehension, which are essential for developing literacy in the twenty-first century (Adnannudin et al., 2020; Dhini, 2020). One contributing factor is that the teaching materials commonly used in Indonesian language classrooms still emphasize text comprehension at the literal level and provide limited opportunities for students to engage in structured, reflective, and critical reading activities. Therefore, there is an urgent need to develop innovative teaching materials that not only improve students' reading comprehension but also systematically facilitate the progression from basic understanding to higher-order literacy through a more active, contextual, and integrative learning approach (Coady, 1997; Kadek et al., 2021; Yusnan, 2022).

This problem becomes even more apparent when linked to international findings through the Programme for International Student Assessment (PISA) (Diana et al., 2025). In several assessment cycles, Indonesian students' reading literacy achievements have consistently been in the low category, especially on questions that require the ability to integrate information from various parts of the text, draw high-level inferences, and critically evaluate arguments (Adnannudin et al., 2020; Susanti & Risnanosanti, 2019). In PISA 2022, Indonesia's reading score was recorded at 359, far below the OECD average of 476 (Nurjaman, 2024). This figure is not just a statistic, but a reflection that most students are still at the level of literal comprehension and have not yet optimized their higher-order thinking skills. In fact, 21st-century literacy requirements require students to be able to analyze, evaluate, and critically reflect on information (Rahayu, 2025; Diana, 2025).

Interestingly, on the other hand, the illiteracy rate in Indonesia continues to decline and reached 1.08% in 2023 (Dewi & Adji, 2024). This shows the success in increasing access to basic education. However, the low reading literacy scores in PISA indicate that the current literacy problem is no longer about technical reading skills, but rather the quality of reading comprehension. Students are relatively capable of answering literal questions, but still experience difficulties in the process of interpretation, inference, and critical evaluation (Diana & Wirawati, 2020). In other words, reading instruction in schools has not fully encouraged students to construct meaning in a deep and reflective manner.

Pedagogically, reading instruction in junior high schools generally uses two main approaches, namely intensive reading and extensive reading (Wirawati, 2023). Intensive reading focuses on in-depth analysis of specific texts, such as identifying structure, linguistic elements, and implied meaning. Meanwhile, extensive reading aims to improve reading fluency and interest through exposure to a greater variety of reading materials (Carolina et al., 2017). In theory, these two approaches complement each other. Extensive reading builds habits and motivation, while intensive reading develops depth of understanding. However, in practice, the two are often taught separately and are not designed within an integrated learning framework (Himawan & Fathonah, 2020). As a result, students have a fragmented reading experience: they read many texts without depth, or analyze texts without a strong foundation of reading habits (Diana et al., 2025).

These conditions indicate the need for an approach that can systematically integrate the strengths of extensive and intensive reading. The Extensive-Intensive Reading Integration Model (MIME) was developed in response to this need. In this model, extensive reading is placed as the initial stage to build motivation, fluency, and exposure to various types of texts (Aziz et al., 2025). After that, intensive reading is used as a space to process reading more deeply through analytical, interpretive, and evaluative activities (Suyata, 2023; Khayaal, 2019). Thus, learning does not stop at reading activities alone, but continues to a more complex process of thinking and meaning-making (Park, 2018; Suwarso, 2022).

This approach is in line with the construction of reading comprehension that emphasizes the gradual development from literal comprehension to inferential, evaluative, and appreciative comprehension as described in Barrett's Taxonomy. This integration is expected to bridge the gap between basic reading skills and higher-order thinking skills, which have been the main weakness of students (Supranoto, 2018; Blachman, 2002). Initial observations in several junior high schools in Malang, East Java, show that reading instruction is not yet supported by teaching materials that explicitly integrate intensive and extensive reading objectives. Teachers still use textbooks that separate the two approaches, and in some cases, one approach is more dominant than the other. In addition, the available teaching materials are not fully designed to develop reading comprehension gradually and systematically in accordance with the demands of global literacy. This condition shows a gap between pedagogical needs in the classroom and the available learning tools.

Previous studies have made substantial contributions to the advancement of reading instruction by investigating extensive reading, intensive reading, reading comprehension strategies, and the development of instructional materials (Carolina et al., 2017; Diana & Wirawati, 2020; Kadek et al., 2021; Rofifah, 2020; Susanti & Risnanosanti, 2019; Suwartini & Fujiastuti, 2017). Collectively, these studies demonstrate that extensive reading contributes to reading fluency, motivation, and vocabulary development, whereas intensive reading strengthens close reading, textual analysis, and critical comprehension. Despite these important findings, the two approaches continue to be conceptualized and implemented as separate instructional practices. This fragmented perspective limits students' opportunities to experience reading as a continuous cognitive process in which broad textual exposure is transformed into deeper interpretation, critical analysis, and reflective meaning-making. Consequently, students may develop reading fluency without sufficient analytical competence or, conversely, acquire analytical skills without establishing sustainable reading habits. Such instructional fragmentation has become increasingly problematic in the context of twenty-first-century literacy, which requires learners not only to comprehend texts but also to synthesize information, evaluate evidence, construct arguments, and make informed judgments across diverse textual sources.

Another important limitation concerns the design of instructional materials. Existing teaching materials generally emphasize either extensive reading or intensive reading and rarely provide a systematic instructional sequence that connects both approaches within a coherent pedagogical framework. Moreover, only limited studies have explicitly employed Barrett's Taxonomy to scaffold students' progression from literal comprehension to inferential, evaluative, and appreciative reading. Without a structured progression of comprehension levels, students' higher-order literacy development is unlikely to occur systematically. This gap underscores the need for instructional materials that integrate reading engagement, analytical comprehension, and critical literacy into a unified learning process rather than treating them as isolated instructional objectives.

Responding to this need, the present study introduces the Extensive-Intensive Reading Integration Model (MIME) as the pedagogical foundation for developing Indonesian language teaching materials. Unlike conventional instructional approaches that position extensive and

intensive reading as independent classroom activities, MIME establishes a sequential learning architecture in which extensive reading functions as the cognitive and motivational foundation for intensive reading (Prayuda et al, 2023; Moon et al, 2022). Students first develop reading fluency, background knowledge, vocabulary, and reading engagement through extensive reading before progressing to intensive reading activities that promote interpretation, inference, analysis, evaluation, and reflection. The instructional sequence is explicitly aligned with Barrett's Taxonomy, enabling the gradual development of higher-order reading comprehension through systematic pedagogical scaffolding. Accordingly, the novelty of this study lies not merely in producing a new set of teaching materials, but in proposing an integrative instructional framework that conceptually and pedagogically bridges reading habit formation with higher-order comprehension within a single learning model. Based on this theoretical and empirical gap, this study aims to develop MIME-based Indonesian language teaching materials using the R2D2 development model, evaluate their validity and practicality, and examine their effectiveness in improving junior high school students' reading comprehension. Accordingly, the following research questions guide the study:

RQ1. How can MIME-based Indonesian language teaching materials be developed using the R2D2 development model?

RQ2. To what extent are the developed teaching materials valid according to subject matter experts, instructional design experts, and graphic design experts?

RQ3. To what extent are the developed teaching materials practical for classroom implementation?

RQ4. To what extent are the developed MIME-based teaching materials effective in improving students' reading comprehension compared with conventional teaching materials?

RESEARCH METHOD

Research Design

This study employed a Research and Development (R&D) approach using the Recursive, Reflective Design and Development (R2D2) model proposed by Willis. The R2D2 model was selected because it emphasizes an iterative, reflective, participatory, and context-sensitive development process, allowing instructional products to be continuously refined based on empirical evidence and users' feedback. Unlike linear development models, R2D2 accommodates repeated revisions throughout the development process, ensuring that the resulting teaching materials are theoretically sound, pedagogically appropriate, and responsive to the actual needs of teachers and students.

The implementation of the R2D2 model in this study consisted of three interconnected stages: (1) Define, which focused on identifying instructional problems and conducting a comprehensive needs analysis; (2) Design and Develop, which involved designing, developing, validating, revising, and conducting limited trials of the MIME-based teaching materials; and (3) Disseminate, which involved limited implementation of the validated product through field testing to evaluate its practicality and effectiveness. Throughout these stages, continuous reflection and recursive revision were undertaken to ensure that the developed teaching materials met both theoretical and practical requirements.

Define Stage (Needs Analysis)

The define stage aimed to identify instructional problems, learner characteristics, curriculum requirements, and the need for developing MIME-based Indonesian language teaching materials. Activities conducted during this stage included classroom observations, curriculum and textbook analysis, semi-structured interviews with Indonesian language teachers and students, and document analysis of lesson plans and assessment materials used in reading instruction at SMPN 12 Malang.

Structured observation sheets were employed to examine classroom interaction, students' reading engagement, teachers' instructional practices, and the use of existing teaching materials. Semi-structured interview guides were used to explore teachers' and students' perceptions regarding challenges encountered during reading instruction, whereas document analysis forms were used to examine curriculum alignment, learning objectives, instructional materials, and assessment practices.

The collected data were analyzed to identify the gap between expected learning outcomes and students' actual reading performance. The findings indicated that existing reading instruction had not optimally facilitated inferential, analytical, evaluative, and reflective comprehension as proposed in Barrett's Taxonomy and reflected in the PISA literacy framework. These findings subsequently served as the empirical basis for designing the MIME-based teaching materials.

Design and Develop Stage

Based on the results of the needs analysis, MIME (Model Integrasi Membaca Ekstensif–Intensif)-based Indonesian language teaching materials were designed following the principles of constructive alignment and authentic learning. The development process emphasized the alignment among learning objectives, instructional activities, learning materials, and assessment tasks to ensure consistency throughout the instructional design. The developed teaching materials were organized into sequential learning activities integrating extensive reading and intensive reading. Extensive reading activities were designed to enhance students' reading fluency, motivation, and exposure to diverse texts, whereas intensive reading activities guided students toward literal, inferential, evaluative, and appreciative comprehension based on Barrett's Taxonomy. This instructional sequence constituted the core pedagogical framework of the MIME model. The development process was iterative and participatory, involving Indonesian language teachers as prospective users to ensure that the learning objectives, reading texts, instructional activities, and assessment tasks were appropriate for students' characteristics, curriculum requirements, and classroom contexts. Feedback obtained during the development process was continuously incorporated into product revisions.

Product Validation

The initial prototype was subsequently validated through expert appraisal involving subject matter experts, instructional design experts, and graphic design experts. The experts were purposively selected based on their academic qualifications and professional expertise in their respective fields. Each expert evaluated the product using structured validation sheets covering content accuracy, curriculum relevance, instructional organization, language appropriateness, presentation quality, graphical design, and overall usability. Quantitative validation scores were analyzed descriptively to determine the validity level of the developed teaching materials, while qualitative suggestions and comments provided by the validators served as the basis for product revision and refinement before classroom implementation.

Limited Trial and Field Testing

Following expert validation and product revision, the teaching materials were implemented in a limited trial involving 30 Grade VIII students at SMPN 12 Malang, East Java, selected through purposive sampling to represent the target users of the developed product. The limited trial aimed to evaluate the readability, clarity of instructions, appropriateness of learning activities, and overall practicality of the teaching materials. Data were collected using student response questionnaires and brief semi-structured interviews. Questionnaire data were analyzed descriptively to determine the practicality level of the

developed teaching materials, whereas interview data were analyzed qualitatively to identify aspects requiring further improvement.

After the final revision, field testing was conducted to examine the effectiveness of the developed teaching materials. The effectiveness test employed an experimental class using the MIME-based teaching materials and a control class using conventional Indonesian language teaching materials. Students in both groups completed reading comprehension tests before and after the intervention. The resulting data were analyzed using appropriate inferential statistical procedures after fulfilling the assumptions of normality and homogeneity. Statistical significance was determined at the 0.05 level ($p < 0.05$).

RESULT AND DISCUSSION

Results

Development of MIME-Based Indonesian Language Teaching Materials (RQ1)

To address the first research question, a comprehensive needs analysis was conducted as the initial stage of the R2D2 development model. The analysis aimed to identify instructional problems, curriculum requirements, and user needs that would serve as the foundation for developing MIME-based Indonesian language teaching materials. Data were collected through classroom observations, interviews with Indonesian language teachers and students, and document analysis at SMPN 12 Malang.

The findings consistently indicated a mismatch between the literacy competencies expected by the Merdeka Curriculum and the characteristics of the teaching materials currently used in reading instruction. Reading activities were predominantly limited to answering comprehension questions and identifying explicit information, with relatively few opportunities for students to engage in inferential, analytical, evaluative, and reflective reading. In addition, extensive and intensive reading were implemented separately rather than as complementary learning processes, resulting in fragmented reading experiences that did not adequately support the development of higher-order literacy skills.

The needs analysis further revealed that both teachers and students required instructional materials that systematically integrate extensive and intensive reading while providing structured learning activities aligned with progressive levels of reading comprehension. Teachers emphasized the need for ready-to-use instructional guidance, whereas students expected learning materials that were contextual, visually engaging, and easier to understand. These findings confirmed the necessity of developing MIME-based teaching materials that integrate reading strategies, authentic learning activities, and Barrett's Taxonomy within a coherent instructional framework.

Table 1
Results of Needs Analysis

Aspects Analyzed	Findings in the Field	Implications for Product Requirements
Reading Learning Condition	Learning is dominated by practice questions; reading activities have not yet developed the ability to understand, integrate, and evaluate information.	Teaching materials need to develop reading skills from literal to evaluative.
Text and Material Types	The texts used are monotonous and lack variety in complexity.	Teaching materials must provide diverse and cognitively challenging texts
Reading Strategies	There has been no systematic integration of extensive and intensive reading.	Structured MIME-based activities are needed.

Aspects Analyzed	Findings in the Field	Implications for Product Requirements
Student Engagement	Students are not active enough in analyzing, discussing, and reflecting.	Teaching materials must follow the principle of constructive alignment..
Curriculum Suitabilit	The Merdeka Curriculum requires HOTS, but teaching materials are not yet appropriate.	Teaching materials must provide activity steps and rubrics
Teacher Needs	Teachers need ready-to-use reading strategy guidelines.	Teaching materials must include authentic tasks that encourage participation.
Student Needs	Students need teaching materials that are interesting, easy to understand, and contextual.	Teaching materials must include communicative visuals and relevant texts.

As presented in Table 1, the identified instructional needs directly informed the design of the developed teaching materials. The product was therefore designed to address five major requirements: (1) the integration of extensive and intensive reading within a single instructional sequence; (2) the provision of diverse and cognitively challenging reading texts; (3) learning activities that progressively develop comprehension from literal to evaluative levels; (4) authentic assessment tasks aligned with learning objectives; and (5) instructional guidance that supports both teachers and students during classroom implementation.

Based on these findings, the MIME-based teaching materials were subsequently designed following the principles of constructive alignment and authentic learning. The product consists of contextual reading texts, sequential learning activities, reflective discussion tasks, and authentic assessments that systematically guide students from extensive reading to intensive reading. This instructional sequence represents the principal characteristic of the MIME model and distinguishes it from conventional Indonesian language teaching materials, which generally treat the two reading approaches as separate instructional practices. Overall, the results of the needs analysis provide empirical support for the development of MIME-based Indonesian language teaching materials and answer the first research question by demonstrating that the product was developed in response to clearly identified instructional needs and grounded in the principles of the R2D2 development model.

Designing and Developing

Designing and developing activities are carried out to design and produce products in the form of MIME-based textbooks for reading comprehension learning in junior high schools. The design activities began with: (1) reviewing the results of the needs analysis; (2) designing the material to be delivered based on the curriculum, learning tools, and educational priorities in accordance with the ministry's regulations, namely deep learning-based learning; (3) designing the product interface, such as the cover design, colors, graphic design, and so on. The following is the textbook design: Development activities were carried out by developing the product and testing it with experts. The experts selected were Indonesian language lecturers at the Faculty of Humanities, UNIKAMA, learning experts, and graphic design experts. The following are the results of the testing.

Validity of the MIME-Based Teaching Materials (RQ2)

To answer the second research question, the validity of the developed MIME-based Indonesian language teaching materials was evaluated through expert appraisal involving subject matter experts, instructional design experts, and graphic design experts. The validation aimed to determine whether the developed product met the required standards of content quality, instructional design, and graphical presentation prior to classroom

implementation. The results of the material expert evaluation indicate that the developed teaching materials achieved a high level of validity, with an average score of 4.50, categorized as Highly Valid (Table 2). The expert confirmed that the instructional content was consistent with the intended learning outcomes, accurately represented the subject matter, and was relevant to the objectives of Indonesian language learning. Although minor revisions were recommended, particularly regarding the inclusion of more recent and contextual reading examples, the expert concluded that the teaching materials were suitable for classroom implementation without substantial revision.

Table 2
Product Material Validity Test Results

No	Aspects Assessed	Number of Indicators	Average	Category	Description
1	The suitability of the material with the learning outcomes, objectives, and outputs in accordance with the RPS	5	4,5	Highly Valid	The material is in line with learning outcomes, accurate, and up-to-date; it is recommended to add recent legal case examples.

Instructional Design Validity

The instructional design expert also evaluated the MIME-based teaching materials as Highly Valid, with an overall mean score of 4.55 (Table 3). The evaluation focused on the alignment between learning objectives, instructional activities, learning assessment, and the principles of outcome-based learning. The results indicate that the developed teaching materials provide a systematic learning sequence, integrate collaborative learning activities, and maintain consistency between instructional objectives and assessment strategies. The expert further noted that the organization of learning activities appropriately supports the progressive development of students' reading comprehension through the integration of extensive and intensive reading strategies.

Table 3
Results of Expert Learning Validity Test

No	Aspects Assessed	Number of indicators	Average	Category	Description
1	Compliance with OBE principles and instructional design	5	4,5	Highly Valid	Systematic learning structure, collaborative activities aligned with learning outcomes.
2	Systematic learning structure, collaborative activities aligned with learning outcomes.	3	4,6	Highly Valid	Evaluation is relevant to the objectives; the assessment format supports outcome-based learning.
3				Highly Valid	

Graphical Validity

Graphical validation was conducted to evaluate the visual quality, readability, consistency of layout, typography, and overall attractiveness of the developed teaching materials. As presented in Table 4, the graphical aspect achieved an average score of 4.55, which also falls within the Highly Valid category. The graphical expert concluded that the teaching materials employed an attractive and consistent visual design that supported students' readability and learning engagement. Minor recommendations included enriching several

visual elements to improve the overall presentation; however, these suggestions did not affect the overall validity of the product.

Table 4
Results of Graphical Validity Test

No	Aspects Assessed	Number of indicators	Avarage	Category	Description
1	Display of Material	5	4,5	Highy Valid	The material is easy to read, interesting, and follows the rules of the Indonesian language.
2	Learning Design Validation (Graphics)	5	4,6	Highy Valid	Attractive, consistent, and easy-to-read design; adding supporting visual elements is recommended..
Avarage		4,55		HighyValid	

The expert validation results demonstrate that the MIME-based Indonesian language teaching materials possess a high level of validity across all evaluated aspects, including content, instructional design, and graphical presentation. The consistently high validation scores indicate that the developed teaching materials are theoretically sound, pedagogically appropriate, and visually acceptable for use in Indonesian language learning at the junior high school level. These findings answer the second research question by confirming that the developed product satisfies the required quality standards prior to classroom implementation.

The dissemination was carried out to test the product to students. The dissemination test was also conducted to test the effectiveness of the product. The product effectiveness test was conducted to test the effectiveness of the product, which was a teaching material book based on the Extensive-Intensive Reading Integrative Model (MIME) in Indonesian Language Learning in junior high schools. The effectiveness of teaching materials based on the Extensive-Intensive Reading Integrative Model (MIME) was tested by comparing the learning outcomes between the experimental class and the control class at SMPN 12 Malang. The experimental class used MIME-based teaching materials, while the control class used conventional Indonesian language teaching materials. The testing was conducted by comparing the pretest and posttest scores of both groups. Statistical analysis showed a p-value of 0.003 ($p < 0.05$), thus rejecting H_0 . These findings indicate that the use of MIME-based teaching materials is significantly more effective than conventional teaching materials in improving students' reading comprehension, text analysis skills, and learning engagement. Thus, the teaching materials developed have been proven to be highly effective and suitable for use as an alternative Indonesian language teaching material at the junior high school level.

Discussion

The findings of this study suggest that the primary challenge in Indonesian language reading instruction extends beyond students' reading performance to the way reading itself is conceptualized in classroom practice. The needs analysis revealed that reading instruction continues to emphasize answering comprehension questions and retrieving explicitly stated information, positioning reading as a procedural activity rather than a process of constructing, interpreting, and critically evaluating meaning. Consequently, opportunities for students to develop higher-order literacy competencies—including inferential reasoning, analytical thinking, reflective interpretation, and critical evaluation remain limited. This finding indicates that improving reading literacy requires not only better teaching materials but also an instructional framework that systematically supports students' cognitive development throughout the reading process (Rahayu et al., 2021).

The findings further demonstrate that the limitations of existing teaching materials are pedagogical rather than merely textual. Although reading materials are available, they generally provide limited thematic diversity, insufficient cognitive challenge, and lack a coherent instructional sequence linking extensive and intensive reading activities. As a result, students experience reading as fragmented learning tasks instead of a continuous process in which broad reading exposure gradually develops into deeper textual analysis and reflective understanding. This fragmented approach restricts students' opportunities to engage in meaningful literacy practices, including interpretation, discussion, evaluation, and knowledge construction, all of which are fundamental components of contemporary literacy education (Fujiastuti & Wirawati, 2025). These findings therefore reinforce the need for an instructional model that deliberately integrates extensive and intensive reading within a coherent pedagogical framework rather than implementing the two approaches as separate instructional practices (Kearns, 2022).

The findings indicate that the MIME-based teaching materials represent more than a new instructional resource; they offer an integrated pedagogical framework that addresses the disconnect between curricular expectations and classroom reading practices. Unlike conventional teaching materials that typically emphasize either extensive reading to improve reading fluency or intensive reading to strengthen textual analysis, the MIME model deliberately combines both approaches within a coherent instructional sequence. This integration enables students to progress systematically from broad reading exposure to deeper interpretation, critical evaluation, and reflective meaning construction. Consequently, reading is no longer positioned merely as a process of retrieving information but as a higher-order cognitive activity that supports comprehensive literacy development (Andi et al., 2025). This finding extends previous studies by demonstrating that the effectiveness of reading instruction depends not only on the selection of reading strategies but also on how these strategies are pedagogically integrated within instructional materials (Kemdikbud, 2019; Laili Etika Rahmawati & Vitria Indriyani Setyaningsih, 2021; Purwaning Tyas, 2017; Putri et al., 2015; Qudus & Yusri, 2017).

The effectiveness of the developed teaching materials can also be explained through the principle of constructive alignment, which ensures coherence among learning objectives, instructional activities, and assessment strategies (Diana, 2020). Such alignment provides students with a clear progression from learning intentions to learning experiences and assessment, thereby creating a more meaningful and purposeful reading process. This pedagogical structure is particularly relevant to the implementation of the Merdeka Curriculum and deep learning approaches, both of which emphasize conceptual understanding, critical inquiry, and active student engagement rather than the acquisition of isolated knowledge (Rahayu et al., 2020; Himawan et al., 2025; Fujiastuti et al., 2025). Therefore, the contribution of the MIME model lies not only in integrating extensive and intensive reading but also in organizing these learning experiences into a coherent instructional design that systematically supports higher-order literacy development.

The consistently high expert validation scores further strengthen the credibility of the developed teaching materials. Validation by subject matter experts, instructional design experts, and graphic design experts indicates that the product satisfies essential academic, pedagogical, and visual quality standards required for classroom implementation. More importantly, the convergence of these expert evaluations suggests that the effectiveness of instructional materials depends on the interaction between content quality, instructional organization, and visual presentation rather than on any single component in isolation. This finding supports the view that well-designed teaching materials should integrate conceptual accuracy, pedagogical coherence, and user-friendly presentation to maximize learning effectiveness (Lidia, 2018; Zainal et al., 2019).

The positive evaluation of the graphical aspect also carries important pedagogical implications. Rather than functioning solely as an aesthetic feature, visual design contributes to improving readability, directing students' attention, reducing cognitive load, and facilitating engagement throughout the learning process. In literacy instruction, where students continuously interact with complex texts, an accessible and visually coherent layout can enhance comprehension by allowing learners to allocate greater cognitive resources to interpreting textual meaning instead of navigating instructional materials. Therefore, the graphical quality of the MIME-based teaching materials should be understood as an integral component of effective instructional design rather than as a supplementary design element (Zekeik, 2025).

The effectiveness testing demonstrates that students who learned using the MIME-based teaching materials achieved significantly better reading comprehension outcomes than those who used conventional instructional materials. This finding suggests that integrating extensive and intensive reading within a coherent instructional sequence provides complementary cognitive support, enabling students to move progressively from broad text exploration to detailed analysis, interpretation, and critical evaluation. These results are consistent with previous studies highlighting the individual benefits of extensive reading for reading fluency and motivation and intensive reading for analytical comprehension. However, the present study extends this body of knowledge by showing that combining the two approaches within a single pedagogical framework produces a more comprehensive learning experience that supports higher-order literacy development (Qudus & Yusri, 2017).

From a practical perspective, the MIME-based teaching materials provide Indonesian language teachers with an instructional framework that can be directly implemented to support literacy-oriented learning. Rather than functioning solely as a textbook, the developed materials guide teachers in organizing reading activities that are sequential, student-centered, and reflective. This structured progression encourages students not only to comprehend textual information but also to construct meaning, evaluate arguments, participate in collaborative discussions, and connect textual ideas with authentic social and cultural contexts. Consequently, the MIME model offers a practical alternative for strengthening the implementation of literacy-based learning within the Merdeka Curriculum (Senthil et al., 2021).

Theoretically, this study contributes to literacy research by demonstrating that reading comprehension develops more effectively when extensive and intensive reading are conceptualized as interconnected rather than independent instructional practices. The MIME model therefore extends existing perspectives on reading pedagogy by proposing an integrated instructional framework that systematically links reading fluency, comprehension, interpretation, and critical reflection within a single learning sequence. This conceptual contribution provides a stronger theoretical foundation for designing literacy instruction that simultaneously promotes reading engagement and higher-order thinking skills (Evianah, 2023a, 2023b; Wasisto, 2023).

Despite these positive findings, the developed teaching materials were evaluated within a single junior high school context and focused primarily on Indonesian language reading instruction. Future refinement of the MIME model may include the incorporation of more diverse text genres, digital and multimodal reading resources, and adaptive learning activities to accommodate students with varying literacy levels. Further studies are also recommended to examine the implementation of the MIME model across different school contexts, grade levels, and socio-cultural settings in order to strengthen the generalizability of the findings and evaluate its long-term impact on students' literacy development.

This study demonstrates that the MIME-based teaching materials are not only valid, practical, and effective but also represent a meaningful pedagogical innovation for Indonesian

language learning. By integrating extensive and intensive reading into a coherent instructional framework, the MIME model contributes to bridging the gap between curriculum expectations and classroom practice while providing a theoretically grounded and practically applicable approach to strengthening students' reading literacy, critical thinking, and reflective learning.

CONCLUSION

The present study aimed to develop Indonesian language teaching materials based on the Integrative Extensive–Intensive Reading (MIME) model and to evaluate their validity, practicality, and effectiveness for junior high school students. The findings demonstrate that the developed teaching materials achieved a high level of validity based on expert evaluation, were considered practical for classroom implementation, and significantly improved students' reading comprehension compared with conventional teaching materials. These findings confirm that integrating extensive and intensive reading within a coherent instructional framework effectively supports the development of students' higher-order literacy skills.

This study contributes to Indonesian language education by providing an empirically validated instructional model that systematically integrates extensive and intensive reading into a single pedagogical framework. The MIME-based teaching materials offer both a practical resource for teachers and a conceptual contribution to literacy instruction by connecting reading fluency, comprehension, interpretation, and critical analysis within structured learning activities. However, the study was conducted in a single junior high school with a limited sample, which may restrict the generalizability of the findings. Future research is therefore recommended to evaluate the implementation of the MIME model across different educational contexts, grade levels, and text genres, as well as to investigate its long-term effects on students' literacy development and critical reading skills.

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DECLARATION OF AI USE

Artificial intelligence (AI) tools were used solely to support language refinement and improve the clarity, coherence, and academic style of the discussion section. The AI-assisted outputs were used as exploratory suggestions for wording and organization and did not replace the authors' intellectual contributions, critical thinking, data analysis, interpretation of findings, or scientific judgment. All research design, data collection, data analysis, interpretation, conclusions, and final manuscript revisions were conducted, verified, and approved entirely by the authors, who assume full responsibility for the content of this manuscript.

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