

Exploring Teachers' Perceptions of Integrating Disaster Mitigation Into Indonesian Language Learning

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Abstract—This study aims to investigate Indonesian language teachers' perceptions of integrating disaster mitigation content into writing instruction, as well as to identify the benefits, challenges, and learning needs. This study was conducted because Indonesia is one of the countries most vulnerable to disasters, yet the integration of disaster mitigation into Indonesian language learning has not been thoroughly explored. The research method used a qualitative approach with purposive sampling of 18 Indonesian language teachers from nine high schools in disaster-prone areas in Indonesia. Data were collected through semi-structured in-depth interviews and analyzed using the Miles and Huberman framework, including data reduction, data presentation, and conclusion drawing. The results revealed three main themes: (1) the flexibility of the Merdeka Curriculum supports the integration of disaster mitigation; (2) constructive learning that utilizes disaster experiences can improve writing skills and mitigation awareness; and (3) the development of supplementary books integrating disaster mitigation into Indonesian language learning should focus on local disaster content. The results indicate that the Merdeka Curriculum has strong potential to support such integration, that the constructive approach encourages active learning, and that the experience of disasters as a source of contextual learning can strengthen students' preparedness in facing disasters and improve their writing skills. This study recommends the development of enrichment books integrating disaster mitigation content, especially for Indonesian language learning in senior high schools.

Index Terms—disaster mitigation, constructive learning, writing, teacher perceptions, innovative education

I. INTRODUCTION

Indonesia, situated along the Pacific Ring of Fire at the convergence of three major tectonic plates, the Indo-Australian, Eurasian, and Pacific, is among the most disaster-prone countries in the world. This geographic position exposes the nation to frequent earthquakes, volcanic eruptions, tsunamis, landslides, floods, and droughts (Meilano et al., 2024; Soetono et al., 2024). The increasing frequency and intensity of climate change-driven events further heighten Indonesia's disaster vulnerability (Abdillah et al., 2025; Aeni & Anwar, 2024; Heo et al., 2023). Consequently, Indonesia currently ranks as the country with the third-highest disaster risk globally, with an estimated 81 percent risk level (Handoyo et al., 2024).

Beyond physical and infrastructural damage, natural disasters exert substantial educational impacts, including disruption of learning activities, destruction of facilities, and psychological trauma among students (Wulandari et al., 2024). Approximately 60 percent of Indonesian schools are located in disaster-prone areas, with tens of thousands exposed to flood, earthquake, and volcanic risks (Septikasari et al., 2022). Data from the Ministry of Education and Culture indicate that over 568,000 students across 5,680 educational units have been affected by disasters (Opabola et al., 2023). These figures underscore the urgency of enhancing disaster risk reduction through education.

To respond to these challenges, the Ministry of Education and Culture issued Regulation No. 33 of 2019 on the Disaster-Safe Education Unit Program. Chapter 2, Article 5 of this policy mandates the integration of disaster mitigation education into Indonesia's national curriculum. This initiative aligns with the President's directive during the 2019 National Coordination Meeting for Disaster Management, emphasizing that education plays a crucial role in building

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disaster-resilient communities (Chotib et al., 2024; Kemendikbud, 2020).

The implementation of the Merdeka Curriculum in 2020 further marked a major transformation in Indonesian education, prioritizing student-centered learning, critical thinking, and flexible content adaptation. This curriculum encourages schools and teachers to contextualize learning with local realities and global issues. However, despite the policy framework, the integration of disaster mitigation content remains weak, particularly beyond subjects such as Science and Geography. Schools have yet to fully exploit the potential of language education as a means of promoting disaster literacy (Maryani & Yani, 2024; Genika et al., 2023; Hafida, 2018).

This gap indicates the need to examine how teachers perceive and implement disaster mitigation themes in writing instruction under the Merdeka Curriculum. Therefore, the present study investigates teachers' perceptions regarding the integration of disaster mitigation content in Bahasa Indonesia writing lessons. It aims to identify the perceived benefits, challenges, and instructional needs associated with such integration, providing empirical insight into how language education can contribute to building a disaster-resilient generation.

II. LITERATURE REVIEW

Research by Kastolani and Mainaki (2018) recommends the importance of designing a learning curriculum that integrates disaster mitigation values into several or even all subjects. In addition, research by Hafida (2018) concludes that efforts to increase understanding of disasters must be provided from an early age, given that Indonesia has a high disaster risk index.

In the context of language education, the Indonesian language serves not only as a means of communication but also as a medium to establish critical and reflective thinking. According to Muslim (2019), Indonesian language learning can be developed to improve students' understanding of disaster mitigation. In addition, Noprina and Putri (2024) and Pratiwi et al. (2023) assess that text-based Indonesian language learning has great potential in integrating disaster mitigation literacy through writing learning.

Writing, a fundamental skill within Indonesian language learning, enables students to articulate ideas, express emotions, and develop logical reasoning. Nevertheless, many learners struggle to produce coherent and meaningful writing due to the absence of authentic and context-driven topics (Haris et al., 2023). Integrating disaster mitigation into writing lessons can provide relevant and meaningful contexts that strengthen both linguistic and cognitive development. Research by Kayaalp (2022) shows that involving students in writing activities related to disasters and environmental issues enhances their cognitive and affective learning, especially in developing story elements and informative text elements (Polat & Dedeoglu, 2023).

Text-based learning is central to Bahasa Indonesia instruction and offers promising potential for embedding disaster mitigation literacy. Different text genres, such as narrative, explanatory, and procedural texts, can naturally accommodate disaster-related themes. Narrative writing allows students to recount personal or imagined disaster experiences, fostering empathy and emotional expression. Explanatory texts promote analytical thinking by examining cause-and-effect relationships and mitigation strategies. Procedural texts, moreover, guide learners to formulate systematic actions for disaster preparedness (Hu et al., 2023; Mangione et al., 2013). This integration aligns with content-based and contextual teaching approaches, in which disciplinary knowledge is used as a medium for language development (Noprina & Putri, 2024; Pratiwi et al., 2023).

Teachers play a critical role in implementing curriculum integration. Their beliefs, readiness, and pedagogical competence determine how effectively disaster education can be embedded within language instruction. Understanding teachers' perceptions helps identify the practical challenges they face, the pedagogical innovations they employ, and the support they need for effective integration (Kristian & Setyasih, 2023). In the context of the Merdeka Curriculum, according to Rakhmawati and Imaniar (2024), teachers' perceptions can reveal how disaster mitigation topics can improve students' writing skills while developing disaster awareness.

III. RESEARCH METHOD

This study employed a qualitative approach through semi-structured interviews to explore Teachers' Perceptions on Integrating Disaster Mitigation Content to Improve Writing Skills in Indonesian Language Education. According to Sugiyono (2019), qualitative research aims to gain an in-depth understanding of the phenomena experienced by the research subjects.

Participants in this study included 18 teachers from nine high schools in Indonesia. They were purposively selected based on three criteria. First, participants had to be Indonesian language teachers in high schools, as these teachers teach students at a critical stage where language skills are being further developed. Second, the schools had to be located in disaster-prone areas. Finally, participants had to understand and have implemented the Merdeka Curriculum, which emphasizes student-centered learning and flexibility in teaching methods. This understanding is crucial for participants to effectively grasp the principles and strategies for curriculum implementation. The sample consisted of teachers with varying years of experience, ranging from 3 to 20 years, and included both male and female educators. This diversity of experience and gender was intended to capture diverse perspectives on the integration of disaster mitigation into writing instruction.

The primary instrument used in this study was an open-ended questionnaire designed to gather detailed responses about educators' learning needs related to disaster mitigation. The questionnaire items were developed through relevant literature and validated by education experts, specifically experts in the development of textbooks and instructional materials, to ensure they aligned with the research objectives and effectively generated rich descriptive data. This step was undertaken to ensure the content validity and reliability of the questionnaire, thereby enhancing the credibility of the findings.

One example question included in the questionnaire is: "In your opinion, does current Indonesian language learning support the implementation of a constructive approach that focuses on student experience?" This question was designed to assess teachers' perceptions regarding the implementation of the current curriculum in Indonesia. Another example question is: "Can disaster mitigation content be integrated into Indonesian language learning?" The purpose of this question is to assess teachers' perceptions of the relevance and feasibility of such integration, identify opportunities and challenges for curriculum improvement, explore innovative pedagogical approaches, and inform the development of educational resources that support effective teaching practices. Regarding students' personal experiences of disasters, the question was: "Do you think it is possible to integrate students' personal disaster experiences as learning resources?"

This question aimed to explore teachers' opinions on using students' personal experiences as learning content. A holistic understanding of this issue will make the development of enrichment textbooks more effective. Interviews were conducted to facilitate direct interaction and gain deeper insight into educators' experiences and perspectives (Creswell, 2014). This approach was adopted to enhance the credibility of the study. Each interview lasted approximately 30–45 minutes and was conducted in a conversational format to encourage open dialogue. Interviews were conducted in person and scheduled at the participants' convenience to accommodate their availability and preferences.

Data were analyzed using a qualitative descriptive approach based on the Miles and Huberman framework (Miles et al., 2014), which consists of three stages: data reduction, data presentation, and conclusion drawing. In the data reduction stage, interview information was selected and grouped based on pre-developed themes. The reduced data was then presented descriptively to provide a clear picture of educators' perceptions and needs. The coding process involved a systematic approach to identifying emerging themes from the data, which was crucial for ensuring the credibility of our findings. Initially, we conducted open coding on the interview transcripts, identifying key phrases and concepts related to teachers' perceptions of the integration of disaster mitigation and their learning needs. Each relevant segment was assigned an initial code, allowing us to capture the nuances of the data. Following this, we conducted focused coding, grouping similar codes together.

To ensure the trustworthiness of the findings, this study employed several strategies as suggested by Creswell (2014). First, data triangulation was conducted by cross-verifying information obtained from interviews with relevant pedagogical documents and observations of the Merdeka Curriculum implementation. This process helped in validating the consistency of the teachers' accounts regarding disaster mitigation integration. Furthermore, the researchers addressed potential researcher bias through reflexivity. As educators ourselves, we maintained a reflexive journal throughout the data collection and analysis process to monitor our personal assumptions and ensure that the findings were grounded strictly in the participants' perspectives. Member checking was also performed by sharing the interview transcripts with the participants to confirm the accuracy of their responses. These measures were taken to enhance the credibility, dependability, and confirmability of the qualitative data.

IV. FINDINGS

Three dominant themes emerged from the qualitative analysis of teacher interviews regarding the integration of disaster mitigation content into Indonesian Language teaching: 1) Curriculum and disaster mitigation content integration, 2) Constructive Approach and Learner Experience, and 3) Enrichment book development. The themes in the findings were derived from qualitative analysis of interviews with Indonesian language teachers, focusing on their perceptions and experiences regarding the integration of disaster mitigation content into writing instruction.

To provide a concise overview of the research findings, Table 1 summarizes the major themes, sub-aspects, and the core insights derived from the teacher interviews. This visualization highlights the alignment between the Merdeka Curriculum's flexibility, the implementation of a constructive approach, and the specific requirements identified for the development of the enrichment book.

TABLE 1
SUMMARY OF RESEARCH FINDINGS ON THE INTEGRATION OF DISASTER MITIGATION INTO INDONESIAN LANGUAGE LEARNING

Major Theme	Sub-Aspects / Focus	Summary of Teacher Perceptions
A. Curriculum Integration	Merdeka Curriculum	The curriculum is perceived as supportive of incorporating real-life issues, including disaster mitigation.
	Urgency of disaster mitigation	Considered essential for students in disaster-prone areas to build awareness and preparedness.
	Implementation challenges	Limited instructional time and lack of specialized textbooks or modules hinder effective integration.
B. Constructive Approach	Learner's active role	Students construct knowledge through direct experience, reflection, and social interaction.
	Personal experience	Leveraging students' own disaster experiences (e.g., floods, earthquakes, volcanic eruptions) makes learning highly contextual.
	Impact on writing skills	Enhances student motivation, engagement, and writing quality by grounding tasks in real-life contexts.
	Disaster awareness	Strengthens critical thinking, responsibility, and environmental care, fostering preparedness for future disasters.
C. Enrichment Book Development	Text types and content	Focuses on narrative, explanatory, and procedural texts integrated with local disaster topics.
	Instructional methods	Problem-Based Learning (PBL) for narrative texts, Inquiry-Based Learning (IBL) for explanatory texts, and Project-Based Learning (PjBL) for procedural texts.
	Disaster topics	Volcanic eruptions, floods, earthquakes, and landslides identified as priority subjects.
	Media and technology	Strong preference for visual aids such as videos, infographics, and animations to simplify complex concepts.
	Assessment methods	Portfolios, performance-based assessments, and project-based evaluations recommended to track student progress.

The theme of curriculum integration opportunities emerged from teachers' discussions about the flexibility of the Merdeka Curriculum, currently in effect in Indonesia, which supports the incorporation of real-life issues, including disaster mitigation. The theme of constructive approach and learner experience was identified through teachers' emphasis on utilizing students' personal disaster experiences as learning resources and the active role of learners in knowledge construction. Lastly, the theme of enrichment book development arose from teachers' insights into the specific resources and materials required, such as enrichment books and training, to effectively implement disaster mitigation content in their teaching.

A. Curriculum and Disaster Mitigation Content Integration

The theme of curriculum and disaster mitigation content integration is described through three questions designed to gauge teachers' opinions and assess the extent of their understanding of the concept of curriculum, disaster mitigation and their interrelationship. These questions aim to determine the level of understanding among teachers, which will serve as a foundation for developing the enrichment book.

The first interview question focused on the Merdeka Curriculum and its support for integrating disaster mitigation material into Indonesian language learning. Analysis of the responses from 18 teachers revealed that the Merdeka Curriculum provides opportunities to incorporate disaster mitigation content in Indonesian language learning. As noted by Teacher 5,

"In my opinion, the current Merdeka Curriculum is flexible, providing space for teachers to relate learning materials to current issues, including disaster mitigation."

In the same vein, Teacher 9 added that the Merdeka Curriculum provides an opportunity for teachers to focus on the essential material that is related to students' real life. Teacher 9 stated that:

"To my understanding, the current curriculum supports the integration of disaster mitigation material in Indonesian language learning, especially because of the Merdeka Curriculum approach which gives teachers the freedom to focus on essential material according to the context of everyday life."

Teachers consider that the integration of disaster mitigation not only supports Indonesian learning objectives but also strengthens the link between classroom learning and real-life problems faced by students.

The second question was about the importance of integrating mitigation in Indonesian language learning. From the data analysis, most teachers agreed that the integration of disaster mitigation material in Indonesian language learning is an essential step. As a disaster-prone country, Indonesian students need to master disaster mitigation knowledge and skills. Teachers in this study emphasized that learners need to be equipped with knowledge about the causes of disasters, potential disasters, and evacuation steps as an effort to reduce disaster risk. In addition, the integration of this material is also seen as a way to build awareness and change students' behavior to be better prepared for disasters.

In addition, regarding teachers' experiences in integrating disaster mitigation into their lessons, 15 of the 18 teachers reported that they had incorporated disaster mitigation content into Indonesian language lessons with varying degrees of

depth and structure, as there were no specific teaching books or modules available. Four teachers used procedure texts to teach evacuation steps when disaster mitigation occurs, while four other teachers utilized explanation or news texts to discuss the causes and impacts of natural disasters. Meanwhile, two teachers used students' disaster experiences or disaster events in general as learning themes. However, teachers used mitigation material merely as supplementary content.

Teachers also identified limited time as a significant obstacle, particularly when trying to align disaster mitigation content with the already demanding curriculum targets. Moreover, the lack of references and supporting materials, such as specialized textbooks or modules on disaster mitigation, further hindered effective implementation in their teaching. These challenges highlight the need for more resources and support to facilitate the integration of disaster mitigation into the curriculum.

B. Constructive Approach and Learner Experience

The second theme was addressed through several questions that focused on the constructive approach in Indonesian language learning, the use of students' experiences as learning resources, and the application of this approach in instruction. The purpose of these questions was to explore teachers' perceptions and understanding of how the constructive approach could be applied, as well as how students' disaster experiences could be utilized as resources to enhance writing skills and deepen understanding of disaster mitigation.

Regarding the question of whether Indonesian language learning supports the implementation of a constructive approach that focuses on students' disaster experience, all teachers agreed that current Indonesian language learning supports the implementation of a constructive approach. Most teachers mentioned that the constructive approach aligns with the objectives of Indonesian language learning, which not only emphasizes mastering grammar while also aiming to develop communication skills, critical thinking, and creativity. The teachers also highlighted that the constructive approach prioritizes the active role of learners in constructing knowledge through direct experience, reflection, and social interaction. For example, Teacher 5 asserted that:

"In my opinion, Indonesian language learning currently supports the application of a constructive approach. Teachers, as learning facilitators, strive to design learning that is relevant to the context and needs of students, utilizing resources available in the students' environment to construct their knowledge."

Building on this, when asked about utilizing learners' disaster experiences as learning resources in Indonesian language learning, all teachers expressed their support. They agreed that personal experiences can create more contextualized learning, as students are able to connect the material with their own real experiences. These disaster experiences can be leveraged to develop language skills as well as an understanding of disaster mitigation as a preparedness effort in facing future disasters.

Answering the third question about what types of disasters in the past three years can be utilized as learning material, 12 teachers cited several types of disasters like floods, earthquakes, and volcanoes as learning material. Another 5 teachers cited other disasters like tsunamis, forest fires, and severe weather conditions. One teacher opined that there is no necessity to restrict the choice of disaster experience to a given time, asserting,

"All types of disasters are learning experiences, as all experiences yield lessons, regardless of a specific time frame."

This viewpoint emphasizes that students' experiences, whether current or past, can be used as valuable learning material. The teachers' attitudes show that the nature of the disaster, as determined by local and regional concerns, is an important factor in choosing the material.

In response to the fourth question about the constructive approach and its effectiveness in improving writing skills, all teachers agreed that this approach is effective in enhancing students' writing skills. Teachers support the application of a constructive approach that utilizes disaster experiences in learning disaster mitigation writing. One teacher stated,

"This approach can spur interest and motivation to learn," while another added, *"It increases active participation and the quality of writing because students write based on the reality they have experienced."*

Overall, teachers highlighted the significant impact of this approach on student engagement and writing proficiency.

The last question on this theme is about how a constructive approach that utilizes disaster experiences as learning materials can shape disaster mitigation awareness. All teachers agreed that this approach is very effective in shaping disaster mitigation awareness in students. Teacher 1 implied,

"Using real-life disaster experiences in our lessons makes the content more relatable and impactful for students."

In addition, ten teachers highlighted that the constructive approach helps learners develop essential knowledge, skills, and attitudes to better deal with disasters. They emphasized that this method empowers students to think critically and act responsibly in the face of disasters. Furthermore, if this approach is maximally applied in learning, it can enhance critical thinking skills and foster values of responsibility and care for the environment. Overall, the constructive approach is considered a strategic step to build disaster mitigation awareness through the writing process.

C. Enrichment Book Development

This theme aims to assess the need for developing enrichment books focused on writing narrative, explanatory, and procedural texts that incorporate disaster mitigation content using a constructive approach. The interview questions related to this theme will cover various topics, including the development of enrichment books, learning materials, teaching methods, and the types of disaster mitigation. Additionally, the questions will explore the presentation formats for materials, the use of learning media and technology, assessment methods, and teachers' expectations regarding learning

outcomes.

The first question about the development of enrichment books for writing narrative, explanatory and procedural texts with disaster mitigation content using a constructive approach received full support from the 18 teachers. All teachers agreed that this book is relevant to the needs of students because it connects learning with real life. Additionally, eight teachers highlighted that integrating disaster mitigation into writing courses encourages active participation and meaningful learning. As noted by Teacher 12:

"I strongly agree with the development of enrichment books that focus on writing narrative, explanatory, and procedural texts related to disaster mitigation using a constructive approach. There are several reasons why this is important, as follows: 1. Connecting Learning to Real Life, 2. A Constructive Approach Encourages Active Participation, 3. Stronger Communication Skills, 4. Character Development and Social Awareness, and 5. Effective Information Dissemination."

In terms of developing learning materials for enrichment books, interviews with teachers indicated strong support for integrating disaster mitigation into text writing. For narrative text, the proposed materials include the concept of disaster mitigation, an understanding of narrative texts, writing exercises, and practical activities based on students' disaster experiences. All teachers concurred on the development of this material, believing it would enhance students' abilities to organize ideas, select appropriate diction, and construct narratives systematically. Six teachers emphasized that this approach is particularly effective because it connects writing skills to students' real experiences.

For explanatory texts, the proposed materials cover earthquake disaster mitigation, an understanding of explanatory texts, writing exercises, and practical activities. All 18 teachers agreed with this draft material, and three teachers suggested including explanations of disaster symptoms to deepen students' understanding of causes and consequences. One teacher recommended broadening the materials to encompass various types of disasters, not just earthquakes, to provide learners with a more comprehensive view of disaster mitigation.

Regarding procedural texts, the learning materials include volcanic eruption mitigation, understanding procedural texts, writing practice, and practical activities. All interviewed teachers found this content relevant and beneficial, as it helps students understand the necessary steps to deal with disasters. However, five teachers suggested expanding the topics to include other disasters, such as earthquakes and floods, for a more thorough understanding.

When discussing appropriate learning methods for writing narrative texts with disaster mitigation content, most teachers recommended Problem-Based Learning (PBL). Twelve teachers noted that PBL encourages critical thinking and collaboration as students analyze and solve disaster-related problems. For explanatory texts, all teachers endorsed Inquiry-Based Learning (IBL), viewing it as a method that promotes active learning and deeper understanding of disaster concepts through investigation. Eight teachers added that IBL fosters critical thinking skills. For procedural texts, teachers recommended Project-Based Learning (PjBL), as it encourages students to create tangible projects, such as disaster preparedness kits or mitigation plans. However, seven teachers also suggested PBL for this content, as it allows for systematic analysis of disaster situations.

The teachers were then asked about disaster subjects in the enrichment book. Based on an analysis of eighteen teachers' viewpoints, it is concluded that volcanic eruptions, floods, earthquakes, and landslides are disaster topics that should be included in enrichment books for producing narrative, explanatory, and procedural texts about disaster mitigation. Given the frequency of volcanic eruptions in Indonesia and their widespread impact on society, a total of twelve teachers selected volcanic eruptions as the main theme. In addition, ten teachers offered floods as a learning topic, while eight suggested landslides, as both disasters are frequently caused by the combination of natural elements and human activity.

Teachers also provided insight into the types of mitigation to be covered in the enrichment book, including prevention, response, and recovery. Twelve out of eighteen teachers advocated for addressing all three aspects, emphasizing their interrelated nature to ensure students understand prevention steps, emergency actions, and post-disaster recovery processes. Regarding the presentation of learning materials, 14 teachers believed that incorporating visual elements such as images, infographics, videos, and case studies would enhance engagement and facilitate understanding of complex concepts. Two teachers highlighted the importance of contextualizing materials by including local disaster examples.

Teachers were also asked about technology-based learning media, such as videos, animations, and digital presentations. The majority (14 teachers) preferred using videos for their interactivity, while four teachers suggested animations and documentaries to illustrate disaster processes and mitigation measures. Teacher 13 noted,

"I believe video is the best option since audio-visual media still plays a significant role in capturing attention, helping students to concentrate more on the material."

Teacher 6 emphasized,

"To enrich the presentation of material in enrichment books focused on writing narrative, explanatory, and procedural texts related to disaster mitigation, several learning media that can be used are digital presentations, videos, and animations."

Additionally, teacher 17 stated,

"The media that can be used include digital presentations, documentary videos, and simulation animations for disaster mitigation. This media will help students understand the material in a more visual and interactive way."

Adapting these media to local disaster experiences was deemed essential for creating a relatable learning experience. All 18 teachers supported the integration of technology in learning to write narrative, explanatory, and procedural texts

with disaster mitigation content. They recognized that technology enhances accessibility to resources and can motivate students. Some teachers noted its role in facilitating the understanding of disaster causes and risks, for example teacher 15 stating,

“By using appropriate learning media, a more enjoyable and effective learning experience can be created for students.”

When it comes to assessment methods for evaluating learning outcomes, teachers expressed support for portfolios, performance assessments, and project assessments. Ten teachers advocated for portfolios, which allow for a comprehensive view of student development through a collection of drafts, revisions, and final products. Teacher 1 noted,

“Portfolios allow teachers to see students' overall development over time. Students can collect various types of work, such as drafts, revisions, self-reflections, and final products.”

Eight teachers found performance assessments valuable for evaluating students' practical application of knowledge and skills. Teacher 2 emphasized,

“Performance assessments enable teachers to evaluate students' abilities to apply knowledge and skills directly.”

Seven teachers recommended project assessments to enable students to demonstrate their learning in real-world contexts, with Teacher 3 stating,

“I expect assessments in the form of projects, such as creating books or short films.”

Finally, teachers were asked about their expectations for learning outcomes from writing narrative, explanatory, and procedural texts with disaster mitigation content using a constructive approach. Their responses highlighted three main aspects: improved writing skills, enhanced understanding of disaster mitigation, and positive changes in students' attitudes. Teachers anticipated that students would develop strong writing abilities, with Teacher 7 noting,

“Students should be able to write texts with a good structure and clear language.”

They also hoped for a deeper understanding of disaster concepts, as Teacher 2 emphasized,

“A better understanding of disaster mitigation is one of the expected outcomes.”

Additionally, teachers expressed a desire to see increased care and awareness of disaster preparedness among students, with Teacher 5 stating,

“The expected outcomes include developing critical thinking and increasing awareness for both students and teachers.”

V. DISCUSSION

This study investigated Indonesian language teachers' perceptions regarding the integration of disaster mitigation into writing instruction within the framework of the Merdeka Curriculum, revealing three interconnected themes that collectively address the research questions. Alignment with Curriculum and Real-World Relevance.

Teachers unanimously recognized the alignment between disaster mitigation content and the curriculum's objectives, appreciating the Merdeka Curriculum's flexibility to incorporate real-world issues. Interviews revealed that teachers view the curriculum as providing the necessary space to connect learning materials with contextual issues, a finding that supports broader educational goals prioritizing the relevance of learning to real-life challenges (Johnson, 2002). This perception aligns with previous research by Kastolani and Mainaki (2018), Susilawati et al. (2024), and Maryani and Yani (2024) which emphasizes the importance of designing curricula integrated with disaster mitigation values at all educational levels, particularly in Indonesia where 60% of schools are located in disaster-prone areas (Opabola et al., 2023). Therefore, the integration of this content is considered a strategic step to equip students with essential knowledge and skills, confirming the findings of scholars who stress the need for preparedness and mitigation efforts from an early age to build a disaster-resilient generation (Kristian & Setyasih, 2023; Rachman et al., 2024).

However, the application remains inconsistent. Although many teachers had attempted varying degrees of integration, they faced challenges such as time constraints and a significant lack of specialized materials. While integration is recognized as important, it has not been fully realized, often being treated as merely additional material rather than structured content. These barriers indicate that the absence of relevant references and systematically developed, integrated materials is a major barrier to optimal implementation, even when curriculum policy is supportive.

The findings also strongly supported the importance of a constructive approach to pedagogy. All teachers interviewed agreed that Indonesian language learning strongly supports this approach, which places learners as the center of the learning process where knowledge is built through interaction with the environment and personal experiences (Diko et al., 2024). In line with Vygotsky's theory (Kozulin et al., 2003), teachers believe that an approach incorporating disaster mitigation focused on students' real-life disaster experiences can effectively bridge learning materials with reality, thereby promoting deeper understanding (Gökbulut et al., 2024; Kamaruddin, 2024).

Teachers recognized disaster experiences as valuable contextual learning resources that can simultaneously develop language skills, such as writing, and build disaster mitigation knowledge. This is consistent with prior research by Pratiwi et al. (2023), and Genika et al. (2023), who concluded that the use of disaster experience allows students to construct new information, identify local potential disasters, and analyze mitigation. Writing based on lived experiences not only motivates students to produce quality writing (Haris et al., 2023; Kayaalp, 2022) but, as emphasized by the principles of contextual learning, also forms disaster mitigation awareness (Asri, 2022). Thus, the constructive approach is confirmed as an effective strategic step to build disaster mitigation awareness through the writing process.

The study culminated in the third theme, where teachers unanimously supported the development of enrichment books for writing narrative, explanatory, and procedural texts with localized disaster content using a constructive approach. The

teachers' strong preference for portfolios, performance, and project-based evaluations underscores a shift toward more comprehensive evaluation tools. This finding is consistent with the contemporary demands for writing assessment models in Indonesia. As noted by Aryana et al. (2024), ideal 21st-century writing assessments should be oriented toward 4C (Communication, Collaboration, Critical Thinking, and Creativity) and HOTS (Higher Order Thinking Skills) aspects, ensuring that the instruments possess high construct validity and objectivity to meet the practical needs of educators in the digital era. This consensus justifies the need to develop materials that fulfill existing resource gaps, aligning with the current national curriculum's goal of training learners to write critically, creatively, and logically for various purposes so as to enhance their learning experiences and writing skills.

Furthermore, the teachers' preference for student-centered teaching methods such as Problem-Based Learning (PBL), Inquiry-Based Learning (IBL), and Project-Based Learning (PjBL) underscores the necessity for a shift in instructional practice. These methods were viewed as effective because they encourage critical thinking, problem-solving, and active learning (Lenga et al., 2022; Gómez & Suárez, 2020). In addition, the learning environment is very important to support successful learning. In their research, Zulaeha et al. (2018) emphasized the importance of a cooperative learning environment, where students can work together, share ideas, and engage in discussions effectively, thereby improving their learning experience and writing skills. The recommendation to use visual media, videos, and technology in material presentation is also supported by multimodal learning theory, and evidence suggesting that these tools enhance engagement, comprehension, and accessibility to complex concepts like disaster mitigation (Miclea et al., 2024; Zhang, 2024).

Collectively, the themes of the interview questions posed to teachers in this study illustrate a crucial feedback loop where the curriculum's flexibility enables integration, which is only most effective when supported by targeted, methodologically sound resources.

VI. CONCLUSION

The Merdeka Curriculum provides opportunities for teachers to develop innovative learning materials by integrating disaster mitigation into Indonesian language lessons. The constructive approach in learning encourages students to actively explore and understand disaster issues through their disaster experiences as a bridge between learning materials and the reality of life; thus, the material learned becomes more relevant to real life. The selection of appropriate learning methods and media plays a role in improving writing skills while fostering disaster mitigation awareness.

Specifically, the study demonstrates that the selection of appropriate disaster topics plays an important role in creating relevant learning experiences for learners. The use of visual media and technology in the presentation of materials can create a more interesting and interactive learning process, thus helping learners absorb information more effectively. The application of learning methods such as Problem-Based Learning, Inquiry-Based Learning, and Project-Based Learning allows learners to apply theoretical knowledge in a real context, and encourages learners to think critically. To support the learning reflection and evaluation process, portfolio, performance, and project-based assessments can be applied as comprehensive measurement tools for students' understanding.

In relation to the research findings, it is recommended to develop enrichment books for writing narrative, explanatory, and procedural texts with disaster mitigation content using a constructive approach for Indonesian language learning in high school. The process of preparing the material and selecting disaster topics should be designed based on the potential local disasters in the students' regions, so that the learning is more relevant to the conditions and daily life.

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DECLARATION OF THE USE OF AI

The authors state that, in the preparation of this manuscript, an AI named Blackbox.AI and DeepL Translate were utilized to assist in the writing process. These tools were used specifically for grammar checking, structural improvements, and verifying English vocabulary usage.

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