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Research Article

The Urgency of Integrating Local Wisdom and Disaster-Resilient Character in the Merdeka Curriculum through the Disaster-Safe Education Unit

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ABSTRACT

Disasters can occur at unpredictable times; therefore, an appropriate disaster mitigation is needed. This research question is about how to integrate local wisdom and disaster resilience in the Merdeka Curriculum through a disaster-safe education program unit. Therefore, this study aims to reveal the importance of this integration. Questionnaires were distributed via Google Forms to all teachers in Aceh and several other regions in Indonesia, such as vocational school teachers in Kalimantan. A total of 144 teachers were respondents in this research. In addition, data was collected through the study literature review (SLR) method. The results of this study are (1) the value of local wisdom needs to be integrated into learning in the Merdeka curriculum to improve disaster resilience, (2) the Project Strengthening Pancasila Profile in the Merdeka Curriculum can support the integration of local cultural values and the character of disaster resilience, (3) the program The Disaster Safe Education Unit has an important role in disaster risk reduction. Therefore, stakeholders, the community, and the government need to pay attention to this condition to create students and communities who have a disaster-resilient character.

Keywords: Local Wisdom; Disaster-Resilient Character; Merdeka Curriculum; Disaster-Safe Education Unit

INTRODUCTION

Disasters can happen at any time, and it is impossible to predict when a disaster will strike. However, the community can participate in disaster risk reduction efforts, such as disaster mitigation and adaptation. Disaster risk is defined as any loss that follows a disaster in a specific location and time frame, including death, injury, disease, threat to life, loss of security, relocation, damage, or property loss that interferes with daily operations in the community (Rahman et al., 2018). Disaster risk reduction is a methodical approach to identifying and controlling the factors that contribute to catastrophes. This includes decreasing exposure to risks, lowering the vulnerability of people and property, managing the environment and land responsibly, and raising readiness for unfavourable events (Permendikbud No. 33, 2019).

To reduce disaster risk among the community, such as educational institutions, an organization is needed that can manage disasters sustainably (Elum & Lawal, 2022; Turner & Zhou, 2023). In this case, the Indonesian government through the Ministry of Education and

Culture has formed a Disaster Safe Education Unit and issued regulations regarding implementing the Disaster-Safe Education Unit program abbreviated as SPAB (in Bahasa) (Permendikbud No. 33, 2019). In addition, the Government of Indonesia, through the Secretary General of the Ministry of Education, Culture, Research, and Technology, has released technical guidelines for carrying out a disaster-resilient education unit program (Persesjen No. 6, 2023). Therefore, SPAB should be implemented as well as planned.

Education is a basic human right that belongs to all individuals. This education is vital for children and young people influenced by conflict and disaster, however, it is frequently heavily disrupted during emergencies disrupting their learning (Oktari et al., 2023). Emergency education includes educational opportunities for individuals of all ages. This includes early childhood education, primary education, secondary education, non-formal education, technical and vocational training, tertiary education, and adult education (Syamsidik et al., 2021). From contingency situations to recovery phases, quality education provides physical, psychosocial, and cognitive support, essential for sustaining and saving lives (Oktari et al., 2018).

Educational opportunities also alleviate the psychosocial impacts of conflict and disaster by promoting a sense of routine, stability, structure, and optimism for the future (Samarakkody et al., 2023). By improving problem-solving and coping skills, education equips students to make informed decisions regarding their survival and the well-being of themselves and others in hazardous situations (Kamil et al., 2020a). This can assist individuals in critically evaluating political messages or contradictory information sources. Schools and other educational settings can act as a foundation for offering essential support beyond education, including protection, nutrition, water and sanitation, and healthcare services.

Emergency education ensures dignity and survival by providing a safe place of education where students and young people who need additional help can be identified and supported (Liesveld et al., 2023). High-quality education can save lives by providing physical safety and protection from various hazards and misuse of environmental crises (Wang et al., 2022). When students are placed in a safe learning environment, the risks of sexual or economic exploitation or other risks such as early or forced marriage, enlistment into military forces, armed groups, or involvement in crime association will be reduced (Saneh et al., 2022). In addition, education can provide important information for building survival skills and coping mechanisms (Parrott et al., 2023).

Crises offer opportunities to teach new skills and values to all members of society: for instance, the significance of inclusive education, active participation, tolerance, conflict resolution, human rights, environmental sustainability, and risk reduction (Shahzad et al., 2022). Education from emergency to recovery must be relevant (Abidah et al., 2020). Education must teach reading, writing, and arithmetic skills, provide a curriculum tailored to students' needs, and encourage critical thinking (Abdi et al., 2021). Education can cultivate a culture of safety and resilience by raising awareness of potential hazards, positioning schools as central hubs for disaster risk reduction within communities, and empowering children and youth with the necessary knowledge and skills (Sakurai et al., 2018, 2020). Teenagers become leaders in disaster prevention (Kamil et al., 2020b). Incorporating local wisdom and disaster resilience into education is crucial. An example of this is the Smong tradition, which helped the people of Simeulue withstand the tsunami (Rahman et al., 2018; Rahman & Munadi, 2019). Based on the context of the problem, the research question is how to integrate local culture and disaster resilience into an independent curriculum through a safety education program unit in the community. This study aims to (1) understand the significance of local wisdom values in education, (2) identify disaster-resilient traits within the Merdeka Curriculum, and (3) examine the implementation of Disaster-Safe Education Unit Programs.

METHODS

Research Design

This research design uses descriptive quantitative research. The researcher used this design to describe the importance of integrating local wisdom and disaster-resilient character in the Merdeka Curriculum through a disaster-safe education unit program. Apart from that, this

research also uses field survey techniques to survey schools affected by disasters during emergency conditions.

Data Collection and Analysis

Google Forms was used to disseminate questionnaires to all Aceh teachers as well as instructors in numerous other Indonesian provinces, including Nort Sumatra vocational school teachers. To get thorough data, the teachers who participated in this research a total of 144 teachers were responders. These teachers came from different study programs. In addition, data was collected through the study literature review (SLR) method. An SLR is a review that attempts to comprehensively identify, appraise, and synthesize all relevant studies on an assigned subject (Oktari et al., 2020). In this study, the SLR was used to review documents related to the disaster-safe education unit program (SPAB), such as government policies and guidelines for implementing or implementing the disaster education unit program. Data was also collected through field surveys of schools affected by the flash flood disaster at SMAN 1 Bambel, Southeast Aceh, Indonesia. The survey was conducted over two days, December 4 and 5, 2023. Disaster risk in a given location and period refers to the potential for loss due to threats to life, security breaches, displacement, injury, or property damage, leading to disruptions in community activities. The questions in the questionnaire were designed to gather teachers' feedback on how local wisdom is integrated into the Merdeka Curriculum through the disaster-safe education units program (Table 1). The signal for utilizing this tool, the Merdeka Curriculum is rationalized with In Indonesia, disaster education is carried out through the disaster safe program for educational units. Questionnaire data was analyzed using descriptive statistics to see the percentage of teacher responses.

Table 1. Questions in the questionnaire on incorporating local wisdom into learning within the Independent Curriculum through the disaster-safe education unit program are significant.

Response Items
The importance of integrating local wisdom in learning
a. Very important
b. Important
c. Less Important
d. Not important
Reasons why it is important to integrate local wisdom in learning
a. Preserving local wisdom
b. Introducing culture to the younger generation
c. Presenting contextual learning
Strategy for integrating local wisdom in learning
a. Integrate into teaching materials
b. Packing IT-based cultural content
c. Developing culture-based learning tools
d. Developing culture-based learning media
Methods for integrating local wisdom in learning
a. Knowledge management system
b. Demonstration of local wisdom at school
c. Local culture FGD between schools and indigenous communities
Teachers' knowledge of the Disaster Safe Education Unit program in Indonesia
a. Never heard of it but still confused about its application
b. Often heard but still confused its application
c. Often hear and understand the implementation strategy
d. I often hear and have applied it even though I do not really understand it
e. Often heard, understand the strategy, and have never implemented it
Obstacles in integrating disaster mitigation achievements in learning
a. Teachers' understanding of disaster mitigation is still weak
b. Lack of socialization of disaster mitigation in school learning
c. Lack of availability of teaching tools that integrate disaster mitigation achievements into learning

RESULTS AND DISCUSSION

The Value of Local Wisdom in Learning

Integrating local wisdom in learning is considered very important to create a disaster-resilient character. This can be seen from the results of the respondent questionnaire from 143 respondents, 51 percent considered it very important, 48.3 percent considered it important, and 0.7 percent considered it less important (Figure 1). Integrating local culture in learning is considered very important because it can preserve local culture, introduce culture to the younger generation, and provide contextual learning.

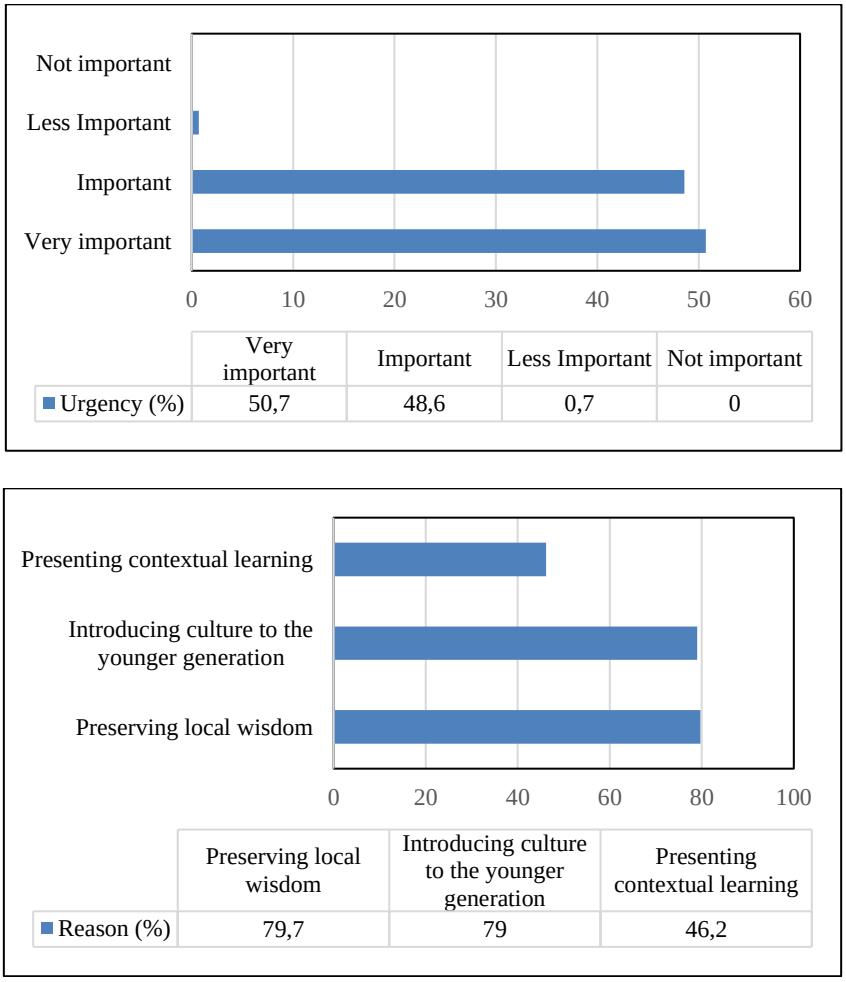


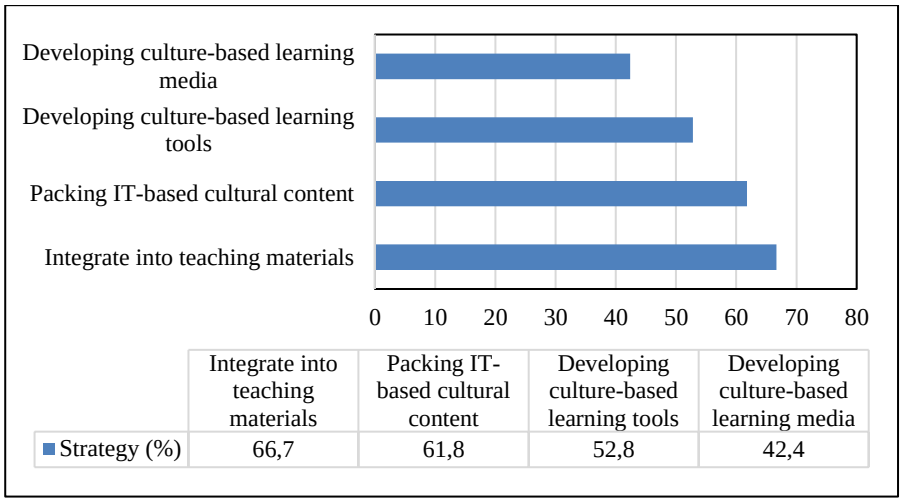
Figure 1. Integration of local wisdom values in learning

To realize the application of local wisdom values in learning, an effective strategy is needed. Strategy in learning is the arrangement and implementation of teaching methods carried out consciously by the teacher to create learning opportunities for all students (Suprihatiningrum, 2013). Apart from that, strategy in learning is also defined as what tactics will be implemented in the classroom so that students can learn effectively and efficiently, and learning objectives can be achieved (Purwanto, 2013). The results of this study classified strategies used to integrate local culture into learning, namely: (1) integrating into teaching materials, (2) packaging information technology-based cultural content, (3) developing culture-based learning tools, and (4) developing culture-based learning media culture. Figure 2 shows teachers' responses to effective strategies used in using local wisdom in learning.

In addition to strategies, teachers also provide responses related to appropriate methods for integrating local cultural values in learning at school. This method has an important role in learning because, with the right method, it will have a positive impact on learning. In this case,

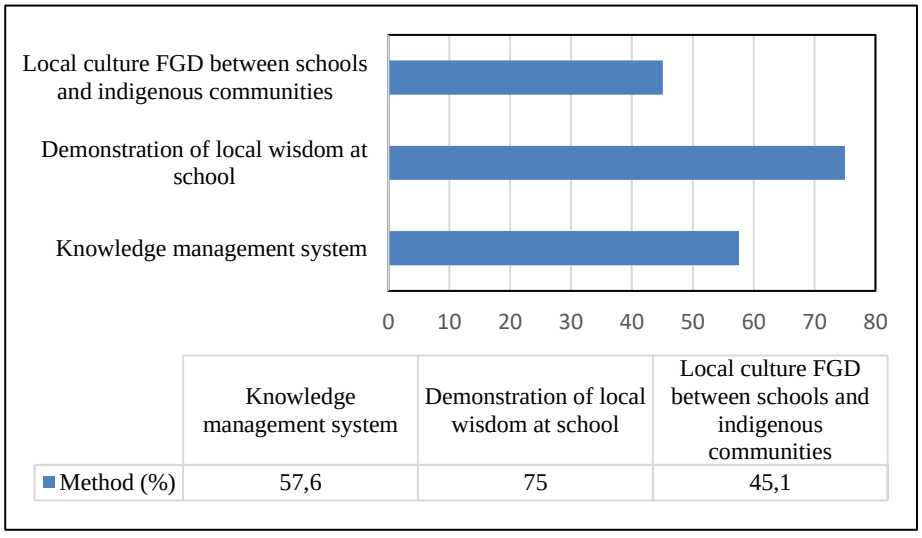
the appropriate method is (1) a knowledge management system, (2) a demonstration of local culture in schools through curricular and extracurricular activities, and (3) local wisdom FGDs between schools and indigenous peoples. The survey results show that the demonstration method is most of the respondents' choice. Thus, local culture must become curricular and extracurricular activities that are routinely carried out at school. Figure 3 shows teachers' responses to effective methods used in integrating local culture in learning.

Society prioritizes education in times of crisis. Schools and other learning spaces are often community centers and represent community opportunities for future generations and hopes for a better life. Students and their families aspire and education is the key to building people's capacity to fully participate in the economic, social, and political life of their communities.



	Integrate into teaching materials	Packing IT-based cultural content	Developing culture-based learning tools	Developing culture-based learning media
Strategy (%)	66,7	61,8	52,8	42,4

Figure 2. Effective strategies used in integrating local wisdom values



	Knowledge management system	Demonstration of local wisdom at school	Local culture FGD between schools and indigenous communities
Method (%)	57,6	75	45,1

Figure 3. Effective methods used in integrating local wisdom values'

In addition to strategies and methods, information and communication technology also plays an important role in integrating local culture into learning, meaning that information and communication technology is needed. This can be seen from the respondents' opinion of the technology used to communicate local culture to students effectively and pleasantly, namely 50 percent answered it was very necessary and 49.3 percent said it was necessary. Thus, it is hoped that the use of information and communication technology can help mitigate disasters for the community.

Culture is one of the wealth of the Indonesian nation. Various types of tribes and cultures can be found on various islands in Indonesia. This culture not only reflects the richness of Indonesian art. But it also teaches about the cultural diversity of different Indonesian tribes in dealing with disasters or what we often call local wisdom. The geographical location of Indonesia which is located at the confluence of three large plates namely the Pacific, Eurasian, and Indo-Australian plates has an impact on the high probability of disasters. The high potential for this disaster forced our ancestors to learn how to overcome or minimize disasters. Currently, this method has become a culture encompassed by the local wisdom of the Indonesian people, which is still cultivated by local communities in Indonesia.

We still remember how the local wisdom of the Smong Simeulue people reduced the number of tsunami victims in 2004 when the number of countries affected by the tsunami reached thousands. Simeulue, an island in Aceh province, recorded six deaths as a result of the disaster (Rahman et al., 2018). Have you ever seen how the architectural form of Rumah Gadang was made without using nails to mitigate the impact of the West Sumatra earthquake? Local wisdom in Indonesia is an asset that needs to be preserved in this era of modernization. The combination of modernization and local wisdom can be an effective way to mitigate the impact of natural disasters in Indonesia.

Disaster Resilient Character in the Merdeka Curriculum

The idea of resilience has gained significant attention and now plays a central role in approaches to risk management, particularly in the context of handling environmental hazards (Parker, 2020). Based on the six directions of the President of the Republic of Indonesia in the National Coordination Meeting for Disaster Management, one of which emphasizes disaster education activities. Therefore, disaster education should be carried out well. Currently, disaster education in the 2013 Curriculum in Indonesia has been well developed. This can be seen in school subjects that already contain disaster material, such as geography subjects (Ridha et al., 2022). With the Merdeka Curriculum, the role of education in creating disaster-resilient students can be achieved.

This role can be carried out through the Pancasila Profile Strengthening Project program. Regarding this, the competency formula for the Pancasila student profile emphasizes attaining graduation competency requirements in character development which is Pancasila values at every stage of the educational unit. The Pancasila student profile's competency takes into consideration both external and internal elements of the Indonesian nation's identity, ideology, and aspirations as well as the challenges the country faces in the twenty-first century, particularly considering the industrial revolution. 4.0. Furthermore, Indonesian students need to possess the abilities needed to become elite, democratic, and productive citizens in the twenty-first century. As a result, Indonesian students can take part in both national and global development that is resilient to a variety of obstacles, such as natural disasters. Consequently, in high-risk locations, disaster risk reduction initiatives that incorporate kid-focused techniques to strengthen the resilience of entire communities (Newnham et al., 2023).

The profile of Pancasila students has a variety of skills that are formed in six main dimensions. The six dimensions are interdependent and mutually reinforcing so efforts to create all these dimensions must be developed concurrently to create a complete Pancasila student profile. The six dimensions are as follows: (1) faith, fear of God Almighty, and noble character; (2) global variety; (3) working together as global citizens; and (4) self-reliance (5) analytical thinking and (6) innovative (Educational Curriculum and Assessment Standards Agency, 2022). These characteristics demonstrate that Pancasila students' profiles emphasize not only cognitive skills but also attitudes and behaviour consistent with their identities as Indonesian citizens and global citizens.

Disaster-Safe Education Unit Program Practices

The Disaster Safe Education Unit Program (SPAB) is an initiative aimed at preventing and managing the impacts of disasters within educational settings. These educational units can

include groups offering formal, non-formal, and informal education across various levels and types of education. Education units can develop disaster risk reduction programs based on the conditions in which a disaster occurs, namely pre-disaster, during an emergency, and post-disaster. Pre-disaster is a normal situation where there is no disaster or risk of disaster. A disaster emergency is a situation caused by a disaster and determined by the government for a certain period which includes emergency preparedness, emergency response, and the transition from emergency response to recovery based on recommendations from disaster response agencies. Post-disaster is a condition determined by the government in carrying out recovery, reconstruction, and restoration efforts.

However, teachers' knowledge regarding disaster-safe education unit programs still needs to be improved. This can be seen from the results of the questionnaire which stated that many teachers had heard of a disaster-safe education unit, but did not know how to implement it (Figure 4). The teacher's lack of knowledge about the disaster-safe education unit program is influenced by the lack of socialization of disaster mitigation in school learning (Figure 5). This is the basis for policymakers to optimize disaster-safe education unit programs.

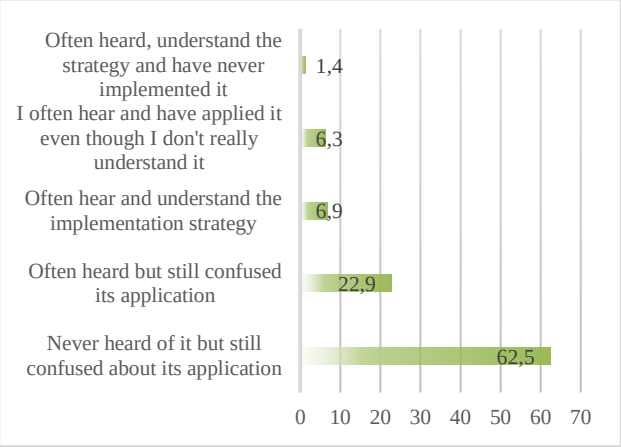


Figure 4. Teacher Knowledge of the Disaster-Safe Education Unit Program

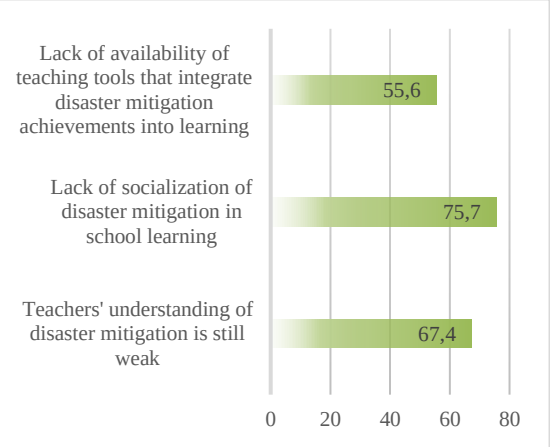


Figure 5. Barriers to integrating disaster mitigation outcomes into learning

The results of field services for schools affected by the flash flood disaster, namely SMAN 1 Bambel, Southeast Aceh Regency, Aceh Province (Figure 6) show an emergency response in the form of transferring learning to safer schools or emergency schools. The school was flooded in 2005, 2012, and again in 2023. In the emergency response, the government immediately ordered cooperation. All students clean the school according to their energy and abilities, but because the condition of the school is badly damaged, cleaning cannot be carried out optimally. The emergency school was implemented at SMKN 3 Kutacane, Southeast Aceh Regency (Figure 7). SMAN 1 Bambel consists of 3 study groups, the teaching and learning process is carried out normally at SMKN 3 Kutacane. However, psychologically the students want to return to their school at SMAN 1 Bambel. The government's role in dealing with flash floods at SMAN 1 Bambel, Southeast Aceh Regency is to prepare education for disaster preparedness and response. However, a Disaster Safe Education Unit (SPAB) has not yet been established at SMAN 1 Bambel, Southeast Aceh Regency. The hope is (1) that the school will be cleaned immediately so that the teaching and learning process can continue as usual, (2) normalize the river flow, because the river flow changes towards the school, and (3) that therapy is needed for students to avoid trauma.

Figure 6. SMAN 1 Bambel, Southeast Aceh Regency which was affected by the flash flood disaster

Figure 7. Emergency school conditions for SMAN 1 Bambel at SMKN 3 Kutacane, Southeast Aceh Regency

CONCLUSION

Based on the results of the discussion above, the conclusions in this study are: (1) local wisdom values need to be integrated into learning in the Independent Curriculum to improve disaster resilience, (2) Through the Pancasila Profile Strengthening Project program in the independent curriculum can support the integration of local cultural values and disaster resilient character, (3) Disaster Safe Education Unit Program has an important role in disaster risk reduction. The profile of Pancasila students has various skills that are formed in six main

dimensions. The six dimensions are interdependent and mutually reinforcing so efforts to create all these dimensions must be developed concurrently to create a complete Pancasila student profile. The six dimensions are as follows: (1) faith, fear of God Almighty, and noble character; (2) global variety; (3) working together as global citizens; and (4) self-reliance (5) analytical thinking and (6) innovation. Apart from that, disaster-safe schools need to be established to create disaster resilience for schools and students. It is hoped that the dimensions of the Pancasila student profile will become a disaster-resilient character for teenagers in schools. So stakeholders need to pay attention to this condition to create students and communities who have disaster-resilient characters.

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DECLARATIONS

Conflict of Interest

We declare no conflict of interest, financial or otherwise.

Ethical Approval

The research has been approved by the Universitas Syiah Kuala. All research was carried out in accordance with Universitas Syiah Kuala research ethics guidelines applicable when human participants are involved.

Informed Consent

On behalf of all authors, the corresponding author states that all participants have been given informed consent and agreed to take part in this study.

DATA AVAILABILITY

Data used to support the findings of this study are available from the corresponding author upon request.

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