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CHALLENGES AND STRATEGY: INTEGRATION DISASTER EDUCATION AT ELEMENTARY SCHOOLS IN DISASTER PRONE AREAS

Zela Septikasari[1], Irvan Budhi Handaka[2], Ningrum Perwitasari[3]

[1,3]ElementarySchool Teacher Education, Faculty of Teacher Training and Education, Universitas PGRI Yogyakarta, Yogyakarta, Indonesia
[2] Department of Guidance and Counseling, Faculty of Teacher Training and Education, Ahmad Dahlan University, Jalan Kolektor Ring Road Selatan, Tamanan Banguntapan Bantul, Yogyakarta, Indonesia

Abstract. This research was conducted to analyze challenge and strategy of integration disaster education in elementary schools located in disaster-prone areas. This research is a qualitative research using descriptive design. This research used interview instrument in data collection. The respondents were 23 elementary school teachers in Sleman Regency, Special Region of Yogyakarta. The study found several challenges in integrating disaster education. These include the absence of disaster media that supports such integration, limited knowledge and skills of teachers, insufficient learning time, inadequate facilities and infrastructure, and constrained school budgets. The study also proposed strategies to address these challenges. These strategies involve creating disaster integration learning media, conducting regular disaster training and simulations in schools, enhancing the role of education offices, improving supporting facilities and infrastructure, incorporating disaster education into the compulsory curriculum, fostering collaboration between schools and relevant organizations such as the Education Office, Regional Disaster Management Agency (BPBD), Taruna Siaga Bencana (TAGANA), and Villages, establishing sister schools, and promoting early disaster awareness among students. Implementing these strategies can help overcome the challenges and enhance the integration of disaster education in schools.

Keywords: Challenges, Strategy, Disaster Education, Elementary School, Disaster Prone Area

1. Introduction

Indonesia is a country that has a high risk of disasters. Indonesia is geographically located between the meeting of three plates, namely the Eurasian Plate, the Pacific Plate, and the Indo-Australian Plate. This causes Indonesia to have a high risk of earthquake disasters. Indonesia also has natural, non-natural, and social hazards.(Zela Septikasari et al., 2022). The various types of hazards identify that Indonesia needs preparedness efforts that are implemented before a disaster occurs, so that it can reduce the impact caused by the disaster. Preparedness can be done by integrating disaster education.

Disaster education is implemented through the integration of learning carried out in class every day (Nagata & Kimura, 2020). The role of disaster education in preparedness needs to receive widespread attention worldwide. Disaster education must be implemented optimally in order to increase students' awareness and ability in dealing with disasters. Disaster education is a positive thing that must be implemented with integration into the curriculum. Disaster education can also be implemented by developing a disaster education curriculum that makes it a mandatory curriculum. Disaster education can also be implemented by designing

special disaster education books. Integration of disaster education will increase students' abilities and preparedness in dealing with disasters (Zhu & Zhang, 2017). Disaster education is important to be implemented in schools, so that students have good knowledge and skills in dealing with disasters. This will reduce the risk of disasters, especially fatalities in the school environment.

Disaster education integration has been implemented in Indonesia in the last 10 years. Disaster education integration is carried out through curriculum, local content, and self-development (Zela Septikasari et al., 2022). Based on the results of initial observations, obstacles in the implementation of disaster education integration come from internal and external factors. Internal factor obstacles come from the implementation of disaster education integration, teacher capabilities in disaster education integration, school support, and lack of facilities and infrastructure that can be used in disaster education integration. While external factors come from the support of other parties in the implementation of disaster education integration, such as the Education Office, Residents Around the School, and parents of students. This is also supported by (Amri et al., 2022)School initiatives in implementing disaster education are still lacking, because they still depend on local government initiatives. Obstacles in implementing disaster education integration also need to be supported by innovations that become strategies in implementing disaster education integration. Based on this background, this study aims to analyze Challenges and Strategies of Integrating Disaster Education at Elementary Schools in Disaster Prone Areas.

2. Methods

This research is a qualitative research using a descriptive design. This research describes the obstacles and strategies in the integration of disaster education in Elementary Schools in Disaster-Prone Areas. The qualitative research conducted in this research is to analyze and interpret interview data. Interviews are related to: (1) Obstacles in implementing the integration of disaster education, (2) Strategies for integrating disaster education in Elementary Schools. This research was conducted at Elementary Schools in Sleman Regency, Special Region of Yogyakarta inin January-June 2023. The selection of Elementary Schools in Sleman Regency as the research location is because many Elementary Schools are located in Disaster-Prone Areas, especially the eruption of Mount Merapi. Participants in this study were selected using a random methodsamplingand snowball. Participants consisted of teachers from 23 Elementary Schools located in the Merapi Eruption Disaster Prone Area.

This study uses in-depth interviews to collect data. In-depth interviews include: (1)Obstacles in implementing disaster education integration, (2) Disaster education integration strategies in Elementary Schools. Interview data is made in the form of interview transcripts. Then Code R1, R2, ..., R23 is used for each research respondent. The data obtained is continued with transcript content analysis. Content analysis is used to determine the concepts and relationships that explain the research data. The data in this study will be categorized into codes, themes, definitions made with codes and themes, and findings that are analyzed and interpreted. The consistency of research data is determined from the indicators and themes obtained from the analysis results. The transferability of the research is obtained from the research process, respondents, data collection tools, and data collection methods are

described in more detail and in detail. The credibility of the research is carried out by presenting the research results directly and supported by the opinions of each respondent as a reinforcement of the research results. Data analysis in this study uses the Miles and Huberman (1992) data analysis model, namely (1) Data reduction, (2) Data presentation, and (3) Conclusion drawing. The conclusions in this study will be followed by evidence obtained during the data collection process. The data obtained to describe the obstacles and strategies in implementing disaster education integration in Elementary Schools in Disaster-Prone Areas.

3. Results and Discussion

3.1. ConstraintIntegration of Disaster Education in Elementary Schools in Disaster-Prone Areas

The interview results identified that the obstacles in the integration of disaster education were related to internal and external factors. The following is table 1 Obstacles to Disaster Education Integration.

Table 1. Constraints to Disaster Education Integration

No.	Indicator	Summary of respondents' answers	n
1.	Obstacles to the integration of disaster education in elementary schools in disaster-prone areas	Time constraints	R1, R5, R6, R11, R15
		Lack of supporting facilities and infrastructure, as well as disaster education learning materials and media	R2, R6, R8, R12, R14, R16, R17, R18, R20, R21, R22, R23
		There has been no cooperation with external parties to the school (BPBD, Tagana, etc.)	R3, R13
		Lack of teacher knowledge	R4, R7, R9, R10, R19, R21, R22
		There is no disaster budget plan yet	R11, R16, R17

Constraints originating from internal factors come from within the school. This is related to time constraints in implementing disaster education integration (n=5), lack of facilities and infrastructure, materials, and supporting media for disaster education integration (n=12), lack of teacher knowledge about disaster education integration (n=7), and schools do not yet have a disaster budget plan (n=3).

> *"There are no books or media on disaster education integration."*(R2), (R12), (R14)
>
> *".....Teachers' skills and knowledge regarding disaster education are still limited, so they need support from BPBD."*(R3)

"……..Teachers' knowledge of disasters is still lacking."(R4), (R9), (R10)
"Time is up for implementing learning."(R5), (R11), (R15)
"There are no special disaster resource persons and most of the teachers are busy so they don't have time."(R6)
*"There are no supporting facilities and infrastructure, as well as media."*R6), (R13), (R16), (R17), (R18), (R20), (R21), (R22), (R23)
*"Limited disaster education support facilities."*R8)
"The school does not have a disaster budget plan." (R11), (R16), (R17), (R21), (R23)
"There has been no disaster training for teachers."(R19)

Constraints originating from external factors are those originating from other parties or not originating from the school. Constraints from external factors include the lack of cooperation between schools and other parties related to the integration of disaster education (n=2).

"The school does not yet have disaster cooperation, especially with the village."(R13)
"The school has not yet collaborated with BPBD."(R3)

Data analysis identified that obstacles in the integration of disaster education 90% came from internal parties of the school, and 10% came from external parties of the school. Internal obstacles that had the largest percentage were the lack of supporting facilities and infrastructure, as well as disaster education learning materials and media at 40%.

3.2.Disaster Education Integration Strategy in Elementary Schools in Disaster-Prone Areas

The interview results identified that the disaster education integration strategy in Elementary Schools in Disaster-Prone Areas can be classified into two, namely the disaster education integration strategy from internal factors and external factors. The following is Table 2. Disaster Education Integration Strategy.

Table 2. Disaster Education Integration Strategy

No.	Indicator	Summary of respondents' answers	n
2.	Disaster education integration strategies in Elementary Schools.	Making integrated disaster education learning media	R1
		Disaster education training and socialization for school residents	R2, R5, R6, R8, R10, R12, R14, R15, R23
		Creating an integrated disaster education curriculum	R3, R4
		Disaster simulation at school	R15

		Collaboration with external parties of the school (BPBD, Village, Tagana, etc.)	R3, R9, R13, R17, R18, R19
		Disaster education integration policy from the Department of Education	R11, R12, R21
		Special disaster education programs for schools (e.g. sister schools)	R7, R16, R20, R22
		Addition of supporting facilities and infrastructure for disaster education	R6

Disaster education integration strategies in Elementary Schools in Disaster-Prone Areas come from internal sources. Internal strategies are initiatives or innovations that are expected by schools so that disaster education can be implemented sustainably. Internal disaster education integration strategies include the creation of disaster education integration learning media (n=1), training and socialization of disaster education to school residents (n=9), creation of disaster education integration curriculum (n=2), disaster simulations in schools (n=1), and the addition of supporting facilities and infrastructure for disaster education (n=1).

"…. Needs special media for disaster education."(R1)
"…. Need disaster training to be able to deal with disasters."(R2),
"Creating an integrated disaster education curriculum."(R3), (R4)
*"Disaster socialization and training in schools."*R2, R5, R6, R8, R10, R12, R14, R15, R23
"Addition of supporting facilities and infrastructure for disaster education."(R6)

Disaster education integration strategies in Elementary Schools in Disaster-Prone Areas come from external sources. External disaster education integration strategies are initiatives or innovations from parties outside the school. External disaster education integration strategies include schools being able to collaborate with other parties (outside the school) (n=6), the Education Office implementing disaster education integration policies (n=3), and creating special disaster education programs for schools (n=4).

"Schools can collaborate with other parties, such as BPBD, TAGANA, Villages, etc."(R3), (R9), (R13), (R17), (R18), (R19)
"The Education Office is expected to have a policy that binds or requires schools to implement disaster education integration."(R11), (R12), (R21)
"….there are special disaster education programs, such as sister schools."(R7), (R16), (R20), (R22)

Data analysis identified that disaster education integration strategies originating from internal factors had a percentage of 51% higher compared to external factors, which was 48%. The internal strategy with the highest percentage was disaster education training and socialization at 33%, while the external strategy with the highest percentage was school cooperation with parties outside the school at 22%.

4. Conclusions

Disaster education integration has been implemented in Elementary Schools in disaster-prone areas. The implementation of disaster education integration has encountered obstacles identified as internal and external obstacles. Constraints originating from internal factors come from within the school. This is related to time constraints in implementing disaster education integration, lack of facilities and infrastructure, materials, and supporting media for disaster education integration, lack of teacher knowledge about disaster education integration, and the school does not yet have a disaster budget plan. Constraints originating from external factors come from other parties or do not come from the school. External factor constraints include the lack of cooperation between schools and other parties related to disaster education integration.

Teachers also have proposed strategies to overcome obstacles. Disaster education integration strategies are also identified internally and externally. Disaster education integration strategies in Elementary Schools in Disaster-Prone Areas come from internal sources. Internal strategies are initiatives or innovations that are expected by schools so that disaster education can be implemented sustainably. Internal disaster education integration strategies include the creation of disaster education integration learning media, training and socialization of disaster education to school residents, the creation of disaster education integration curricula, disaster simulations in schools, and the addition of supporting facilities and infrastructure for disaster education. Disaster education integration strategies in Elementary Schools in Disaster-Prone Areas come from external sources. External disaster education integration strategies are initiatives or innovations from outside the school. External disaster education integration strategies include schools being able to collaborate with other parties (outside the school), the Education Office implementing disaster education integration policies, and creating special disaster education programs for schools.

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