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Disaster Preparedness in Special Elementary Schools: An Analysis of Safety Education in Learning Materials

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Abstract
Safety is a human right, on the other hand, many schools in Indonesia are located in disaster-prone areas. Children are the most vulnerable group during disasters or emergencies, especially children with special needs, so the role of the government through schools is very important to protect them and provide them with basic skills to be able to survive in emergencies. The purpose of this study was to determine the description of the safety education content in teaching materials at Special Elementary Schools (SD LB) as an effort to improve the knowledge and abilities of children with special needs in dealing with emergencies. The research method used is descriptive qualitative. The unit of analysis in this study is all teaching materials at SD LB. Data collection techniques in this study were carried out by means of observation, document studies and semi-structured interviews with representatives of the principals of SD LB. Data analysis was carried out qualitatively and quantitatively to describe the percentage of the distribution of safety education content in teaching materials at SD LB. The results of this study show that the content of safety education for children is already included in the teaching materials for special education from grades 1 to 6 in special elementary schools for the blind, deaf, mentally retarded, physically disabled and autism.

Keywords: special elementary school, safety education, teaching materials.

INTRODUCTION

People with disabilities face risks and obstacles when a disaster occurs, both in the evacuation and recovery process (Stough L, Sharp A, Resch J, Decker C, 2015)(Stough, L. M., Ducy, E. M., & Kang, 2017). Children with disabilities will need additional assistance to evacuate and shelter (Phillips, B. K., & Stough, 2016)(Holmes, T. J., Williams, P. C., Wong, S., Smith, K., Bandzuh, J. T., & Uejio, 2022)(Gershon, R. R., Muska, M. A., Zhi, Q., & Kraus, 2021). For example, a child with an intellectual disability may require additional explanation for evacuation directions (L.M. Stough, E.M. Ducy, 2017)(Isrona, L., Yulistini, Y., Mardhotillah, F., Husna, N., Fauzan, M., Mujahidah, I., ... & Indah, 2021)(Park, 2023). In addition, children with disabilities are often not included in Disaster Risk Reduction (DRR) activities or other disaster risk management (Ronoh et al., 2015). Disaster management activities are generally only given to normal children and still do not include children with disabilities (L.S. Clarke, D.C. Embury, R.E. Jones, N. Yssel, 2014). People with disabilities are often referred to as a vulnerable group (Pertiwi, P., Llewellyn, G., & Villeneuve, 2020), because in terms of disaster mitigation, people with disabilities have a low level of disaster preparedness and face significant challenges during the evacuation process (Aslan, R., & Şahinöz, 2023).

Disaster events have an impact on the education of children with disabilities and Special Schools (SLB) (Stough et al., 2020). The impact is that children with disabilities are at risk of being more severely affected by disasters because they experience difficulties during evacuation (L.M. Stough, E.M. Ducy, 2017); including the risk of losing teachers or other personnel who have expertise in the field of students with disabilities. For example, the Covid-19 pandemic has claimed many victims, such as special education personnel, which has reduced the opportunities for children with disabilities to access education (Ressa, 2021); damage to school facilities such as accessibility features, for example damaged roads; diagnostic records and special education that may be lost as a result of the disaster; during recovery, students with disabilities often depend on the reconstruction of physical infrastructure that allows children to return to school. To meet the special needs of children with

disabilities, evacuation procedures and drills must be accessible and, where necessary, adapted. For example, by building roads that are accessible to children with disabilities. This can be achieved if there are policies that regulate the needs of students with disabilities (Page, A., Anderson, J., & Charteris, 2023).

Disaster warning systems must also be designed to accommodate the needs of children with disabilities (Nagata, T., & Kimura, 2020). In its creation, the warning system must take into account the differences in physical, visual, hearing, and intellectual abilities of students. Since children spend most of their time at school, it is very important for children with disabilities and students in Special Elementary Schools to receive disaster prevention activities like students in other public schools (Jang, J. H., & Ha, 2021)(Soni, A. Lynch, P. McLinden, M. Mbukwa-Ngwira, J. Mankhwazi, M. Jolley, E.; Virendrakumar, B.; Bedford, J.; Gercama, 2020). It is also important to form interdisciplinary working teams and collaborative practices between schools or non-formal learning centers to facilitate access for people with disabilities (Nikolaraizi, M., Argyropoulos, V., Papazafiri, M., & Kofidou, 2021). The disaster mitigation education provided must consist of six main elements, namely: (Rofiah, N. H., Kawai, N., & Hayati, 2021): initiatives to conduct Disaster Risk Reduction (DRR); modification of infrastructure and learning environments to accommodate children with disabilities; expanding learning methods; child empowerment and meaningful participation; awareness of school management and disaster mitigation implementation strategies; broad stakeholder involvement in disaster mitigation education.

METHODS

This type of research uses a qualitative descriptive design. The unit of analysis in this study is all teaching materials in Special Elementary Schools/SD LB. The sampling technique in selecting representatives of SD LB in this study used purposive sampling, namely one of the SD LB located in a disaster-prone area and has implemented the principles of Disaster Preparedness Schools, namely SD LB A in the Special Region of Yogyakarta Province. The data collection technique in this study was carried out by means of observation at school and document study on all SD LB teaching materials on the website https://pmpk.kemdikbud.go.id/bukudigital/. In addition, data collection was carried out using semi-structured interview techniques with representatives of SD LB principals. Data analysis was carried out quantitatively to describe the percentage of distribution of teaching content/teaching materials in SD LB that have safety education content. Meanwhile, qualitative data is analyzed using content analysis.

RESULTS AND DISCUSSION

From the results of the document study that has been conducted, it is known that as many as 84% of the total 208 elementary school textbooks have safety content. With details of 75% of the total 44 elementary school textbooks for the Blind have safety content. As many as 88% of the total 42 elementary school textbooks for the Deaf have safety content. As many as 86% of the total 37 elementary school textbooks for the Mentally Disabled have safety content. As many as 90% of the total 40 elementary school textbooks for the Physically Disabled have safety content. As many as 82% of the total 45 elementary school textbooks for Autism have safety content. The details are shown in Table 1.

Table 1. Overview of Teaching Material Content

Types of Disabilities	Safety Content		Total	Content (%)
	Yes	No		
Blind	33	11	44	75%
Deaf	37	5	42	88%
Mentally disabled	32	5	37	86%
Physically disabled	36	4	40	90%
Autism	37	8	45	82%
Total	175	33	208	84%

Meanwhile, the results of interviews with the principals of Special Elementary Schools show that the elementary schools do not only provide safety education materials in their teaching materials, but also provide disaster training and simulations accompanied by local agencies. Although because of the many types of disabilities in one school, it is necessary to develop innovations, especially for early

warning systems that are friendly to the blind, deaf, mentally retarded, physically disabled and autism.

The results of field observations also show that the school already has an evacuation map, evacuation signs, gathering places, procedures, and emergency response teams. This is not surprising because the school is one of the schools that has implemented disaster preparedness school standards in the Special Region of Yogyakarta Province.

Disaster mitigation education provided ideally consists of at least six main elements, namely: (Rofiah, N. H., Kawai, N., & Hayati, 2021): initiatives to conduct Disaster Risk Reduction (DRR); modification of infrastructure and learning environments to accommodate children with disabilities; expanding learning methods; child empowerment and meaningful participation; awareness of school management and disaster mitigation implementation strategies; broad stakeholder involvement in disaster mitigation education. Where the disaster warning system implemented in schools must be made to suit the needs of children with disabilities (Nagata, T., & Kimura, 2020). In developing its innovation, the warning system must take into account the differences in physical, visual, hearing, and intellectual abilities of students. Since children spend most of their time at school, it is very important for children with disabilities and students in Special Elementary Schools to receive disaster prevention activities as students in other public schools (Jang, J. H., & Ha, 2021)(Soni, A. Lynch, P. McLinden, M. Mbukwa-Ngwira, J. Mankhwazi, M. Jolley, E.; Virendrakumar, B.; Bedford, J.; Gercama, 2020). In addition, the formation of interdisciplinary work teams and collaborative practices between schools or non-formal learning centers to facilitate access for people with disabilities is an urgent matter to be implemented (Nikolaraizi, M., Argyropoulos, V., Papazafiri, M., & Kofidou, 2021).

CONCLUSION

This study shows that the content of safety education for children is already included in the teaching materials for special education at the Special Elementary School level, both for the blind, deaf, mentally retarded, physically disabled and autism. Although almost all levels of Special Elementary Schools already have safety education content, children in these Special Elementary Schools have many limitations, therefore it is recommended that teachers and schools can innovate in the learning media used so that they can provide additional knowledge through simpler and more enjoyable media for students, especially regarding what they should do when they experience threats from natural disasters according to the vulnerability of each locus. Development of innovative teaching methods that can improve safety education for children with various disabilities. The benefits of this study are to provide an overview to stakeholders in the field of safety and disasters regarding the distribution and scope of safety and disaster education content in Special Elementary Schools, so that it can be used as input for compiling a continuous improvement program to increase community resilience, especially Special Elementary School students in facing multi-hazard threats including natural disaster threats.

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