

Achievement of safer learning facilities standards in the disaster safe education unit program at panggang elementary school

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Abstract

This study aims to discover and describe the achievement of safer learning facility standards for the SPAB program at SD Panggang Bambanglipuro. This study is a descriptive-evaluative research mixed-methods approach with a sequential explanatory strategy. The sampling technique was carried out with saturated samples. Data collection techniques used observation, interviews, documentation studies, and questionnaires. Data validity uses internal validation, technical triangulation, and source triangulation. Quantitative data analysis uses a percentage formula calculation according to Sugiyono, while qualitative data analysis uses an interactive analysis model. However, each aspect still has gaps. The gaps that occur are not too significant but still affect the achievement of safer learning facilities. Efforts are needed from SD Panggang Bambanglipuro to reduce or even eliminate existing gaps so that safe learning facilities in the SPAB program can be fully achieved.

Keywords: *program evaluation; discrepancy; safer learning facilities*

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INTRODUCTION

Indonesia is one of the countries with many areas with a high risk of natural disasters. Natural disasters always threaten people's lives, especially those who live in disaster-prone areas. Reporting to the World Risk Index in 2023, Indonesia ranks 2nd out of 193 disaster-prone countries with a WorldRiskIndex of 43.50. (Frege et al., 2023). Throughout 2023, the National Disaster Management Agency also recorded 4,940 disaster events. One of the disaster-prone areas in Indonesia is the Special Region of Yogyakarta (DIY). The Special Region of Yogyakarta (DIY) is an area traversed by an active fault that runs through the center of the region, called the Opak Fault. The existence of the Opak Fault has made the Special Region of Yogyakarta vulnerable to earthquakes. Based on data from the Indonesian Disaster Data and Information for the Special Region of Yogyakarta (DIY), throughout 2020, DIY was shaken by 129 earthquakes, of which 115 were not felt and 14 of them could be felt. (BPBD, 2020). Then, based on incoming reports at the DIY BPBD Pusdalops, in 2022 there were 762 unfelt earthquakes and 9 felt earthquakes.

Based on research conducted by Aswad et al. (2018), Bantul Regency is one of the areas in the Special Region of Yogyakarta with high earthquake vulnerability. On May 27, 2006, an earthquake occurred in Yogyakarta with the epicenter in Bantul Regency, causing a high level of damage. Not only that, some time ago on July 5, 2023, a magnitude 6 earthquake shook the Bantul area, Yogyakarta Special Region Province. The earthquake occurred at sea, or 86 km southwest of Bantul, Yogyakarta, with a depth of 67 km. From the incident, 15 educational facilities were damaged (Badan Nasional Penanggulangan Bencana, 2023). Therefore, disaster mitigation measures are mandatory to minimize the hazards caused by disasters, especially in educational units.

Law of the Republic of Indonesia Number 24 of 2007 concerning Disaster Management Article 44 Letter C explains that disaster mitigation is an effort made to reduce disaster risks for communities in disaster-prone areas by means such as infrastructure development, education, counseling, and training. Education is one of the platforms to run programs related to the government's efforts in disaster management. Education is a key mechanism through which children can participate in disaster risk reduction (Amri et al., 2015). Education is a very important aspect in the development of human resources because education can shape the mindset of a better society. The existence of disaster education can encourage the realization of a disaster-resilient generation so that students can deal with disaster vulnerability. In this case, SD/MI students have a higher disaster vulnerability than other community groups, so when SD/MI students do not know the condition of their area, the impact of a disaster will be even greater. (Hafida, 2018). Therefore, the government launched the Disaster Safe Education Unit (SPAB) Program at every level of education units, ranging from elementary, junior high, high school, and vocational school.

The Disaster Safe Education Unit (SPAB) program is a tactical step by the government to realize disaster safe schools at all levels of education in Indonesia. This program was launched to minimize the risk when a disaster occurs. Khafifah & Wijayanti (2023) in their research showed that the SPAB program implemented effectively provided knowledge of volcanic eruption disaster mitigation to students in junior high schools in Pakem sub-district with a value of 80%. This indicates that the SPAB program can have a significant impact on disaster management efforts. One of the main components of program implementation that underlies the SPAB framework in achieving its objectives is school facilities. Qoriandani & Pambudi (2020) in their research explained that the implementation of the SBB program at SD Unggulan 'Aisyiyah Bantul runs following aspects of preparedness, but the inhibiting factors are related to the school land, which is less extensive, and the equipment needs have not met all school residents.

The Bantul Regency, as an area with a high disaster risk in Yogyakarta, also took part in the implementation of the SPAB program. Based on the pre-research, information from BPBD Bantul Regency showed that there are four primary schools in Bantul Regency that have fully implemented SPAB, namely SD Tirenggo, SD IT Ar-Raihan, SD Unggulan 'Aisyiyah Bantul, and SD Panggang Bambanglipuro. SD Panggang Bambanglipuro is the only public school that has fully implemented it. Based on the pre-research interview at SD Panggang Bambanglipuro, it is known that SD Panggang Bambanglipuro is the first education unit in Bantul Regency to organize SPAB

independently. BPBD Bantul district also stated that the school had fully implemented the SPAB program.

SD Panggang Bambanglipuro is geographically located in the south of the Special Region of Yogyakarta. This area has the potential for tectonic earthquakes because it is close to the plate (subduction zone) at the bottom of the Indonesian Ocean. After the 2006 earthquake, SD Panggang Bambanglipuro suffered 100% damage. The building collapsed completely, and rebuilding began in 2006 with the help of Eka Cipta. In addition, SD Panggang Bambanglipuro also has the potential for extreme weather. In the transitional season, it is very vulnerable to strong winds. Entering the rainy season, the South Bantul area is often hit by strong winds that can cause damage. In 2008, many trees fell due to strong winds. Based on information data from the DIY PB pudalops updated January 1, 2021, over the past five years, this area has experienced frequent strong wind events. Based on this, SD Panggang Bambanglipuro planned a Disaster Safe Education Unit by involving the Bantul Regional Disaster Management Agency (BPBD).

SD Panggang Bambanglipuro has been implementing SPAB since 2021, after it was inaugurated by the Bantul Regency BPBD. A program that has been running for several years needs to be reviewed evaluatively to determine the achievement of various educational program standards in accordance with the design. Therefore, this study examines the achievement of one of the standards for implementing the Disaster Safe Education Unit Program, namely safer learning facilities at SD Panggang Bambanglipuro,” in order to become one of the study materials in the implementation of the Disaster Safe Education Unit Program at the elementary school level.

METHODS

This research is an evaluative descriptive research using mixed methods. Mixed-method research is research that uses quantitative and qualitative procedures simultaneously in one study. The mixed method strategy used is sequential mixed methods, especially the sequential explanatory strategy. This strategy was implemented with quantitative data collection and analysis in the first stage, followed by qualitative data collection and analysis in the second stage. The qualitative data builds on the initial quantitative results. The type of evaluation used in this research is the discrepancy evaluation model. The discrepancy evaluation model is an evaluation model used to determine the level of gap in the program implementation standards that have been set. (Ariani, 2021).

This research took place at SD Negeri Panggang Bambanglipuro, which is located at Jalan Samas Number 19, Tempel, Sidomulyo, Bambanglipuro District, Bantul Regency. This research was conducted in January 2024–May 2024. The population in this study were educators and education personnel involved and responsible for implementing the SPAB program at SD Panggang Bambanglipuro. The sampling technique in this study was a saturated sample technique, namely all members of the population were sampled. This is carried out by researchers because the population is less than 30 people. (Sugiyono, 2012).

The data collection techniques used in this research are questionnaires, interviews, observations, and document studies. The first stage data collection technique is a questionnaire about the achievement of aspects of the Disaster Safe Education Unit Program, followed by the second stage using interviews, observations, and document studies related to gaps in the achievement of aspects of the SPAB program based on the type of evaluation used. There are two types of data analysis techniques in this study, namely analysis techniques for quantitative data and qualitative data. Quantitative data analysis of the results of the questionnaire in this study was calculated using the percentage formula according to Sugiyono (2012) for overall achievement and achievement of each aspect, and then the data on the achievement of all aspects were categorized into 4 predicates taken from a quantitative scale (Suharsimi, 1989) as follows.

Table 1. Suharsimi Predicate Criteria

No	Achievement (in %)	Predicate
1	76 - 100	Achieved
2	51 - 75	Moderately Achieved
3	26 - 50	Underachieved
4	0 - 25	Unachieved

The predicates above are only used to determine the overall achievement of the aspects, while the achievement of each aspect is described based on the percentage in the categories of very unsuitable, unsuitable, quite suitable, suitable, and very suitable. Furthermore, qualitative data analysis was carried out using interactive analysis from Miles, Huberman, and Saldana. Miler, Huberman, and Saldana in Sugiyono (2014) state that data analysis in qualitative research is carried out during data collection and after the completion of data collection within a certain period.

RESULTS AND DISCUSSION

Disasters are events, or series of events, that threaten and disrupt people's lives and livelihoods. Disasters can be caused by natural factors, non-natural factors, and human factors. Disasters result in human casualties, environmental damage, property losses, and psychological impacts. The research results in this study will be presented as follows:

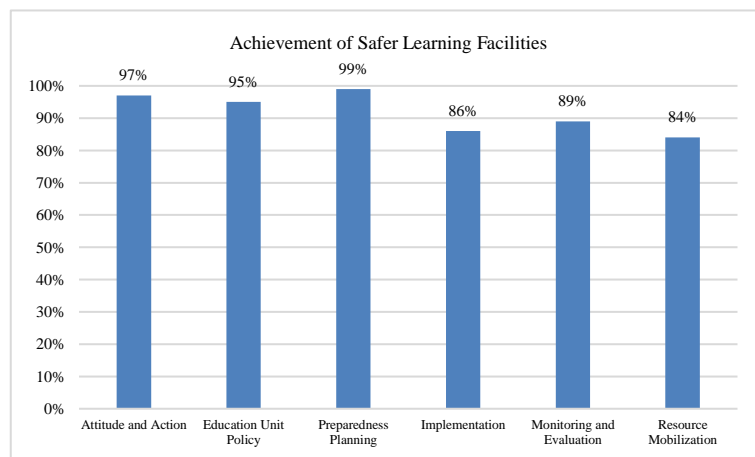


Figure 1. Achievement of Each Aspect

The figure 1 above shows the achievement of safer learning facilities in the Disaster Safe Education Unit Program at SD Panggang Bambanglipuro. Based on Suharsimi's predictive criteria, SD Panggang Bambanglipuro obtained an achieved predicate in each aspect because it obtained percentage results above 76%. Despite this, there are still gaps in each aspect of the safer learning facilities standard in the SPAB program. The following are the research findings related to the gaps in each aspect.

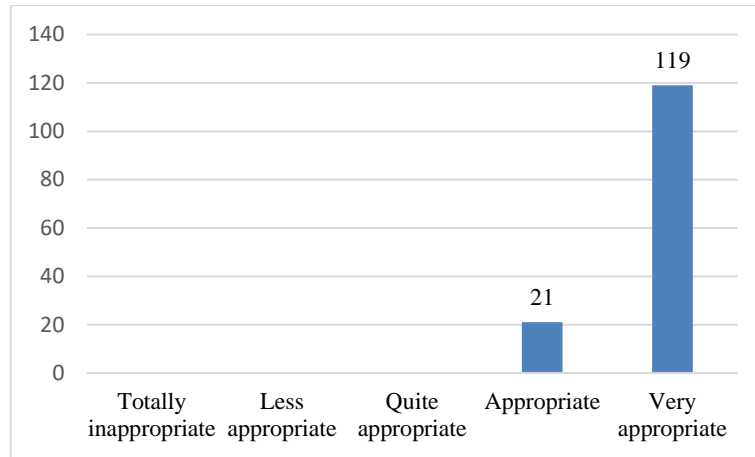


Figure 2. Achievement of Attitude and Action Aspects

Figure 2 shows that in the attitudes and actions aspect of the 10 statement items, the answers of respondents who stated that they were very suitable reached 119, while those who were suitable reached 21. According to these results, in percentage terms, the achievement in the attitudes and actions aspect reached 97%. These results demonstrate that this aspect still has a 3% gap. Thus, in the aspect of attitude and action, there are still gaps because the researcher found things that become notes for the school to improve. The finding noted in this aspect is that although SD Panggang Bambanglipuro has SPAB guidelines, there are still teachers who do not know in detail how SPAB is implemented. This happened when the researcher conducted interviews; there were interviewees who could not answer the researchers' questions and asked other teachers. This condition shows that teachers' knowledge about SPAB, especially on safer learning facilities, is still not thoroughly understood. Thus, this condition is a record of gaps in the aspects of attitudes and actions. Attitude and action aspects can be used as one of the bases in determining policy support in schools. The following are the achievements of the policy aspects of the Disaster Safe Education Unit at SD Panggang Bambanglipuro.

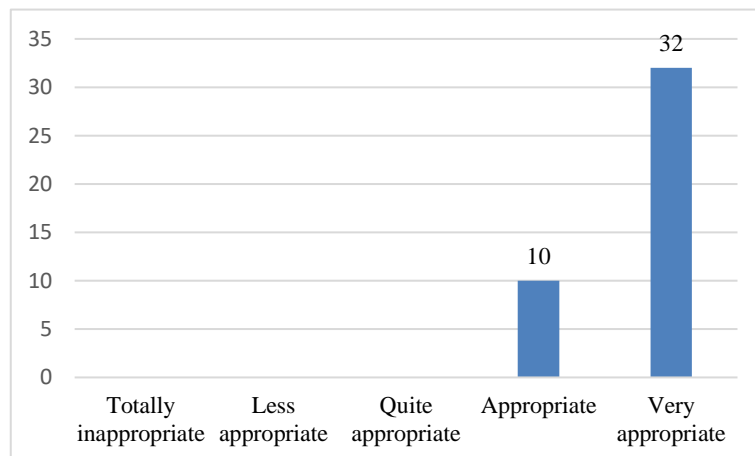


Figure 3. Achievement of Education Unit Policy Aspects

Figure 3 presents data on the achievement of the policy aspect of the education unit. From the 3 statement items, the answers of respondents who stated that they were very suitable reached 32, while those who were suitable reached 10. According to these results, in percentage terms, the achievement in the aspect of attitudes and actions reached 95%. These results show that this aspect still has a gap of 5%. Thus, the policy aspect of the education unit still has gaps because researchers found things that are noted for schools to improve. Policies are basically a form of formal support from school leaders, which are then outlined in school regulations and agreements on what to do and

what not to do. The education unit policy is a decision made formally by the school on matters that need to be supported in the realization of safer learning facilities in the education unit. The policy needs to be elaborated into types of policies to anticipate disasters, such as disaster management organizations, action plans for emergency response, disaster warning systems, education, and disaster allocation (Susanti et al., 2014). In this aspect, 95% of the standards were met. This aspect focuses on the policies or agreements made by schools to support the realization of safer learning facilities at SD Panggang Bambanglipuro. The policy aspect requires support in the form of program planning and implementation; the following is the data on the success of the preparedness planning aspect at SD Panggang Bambanglipuro.

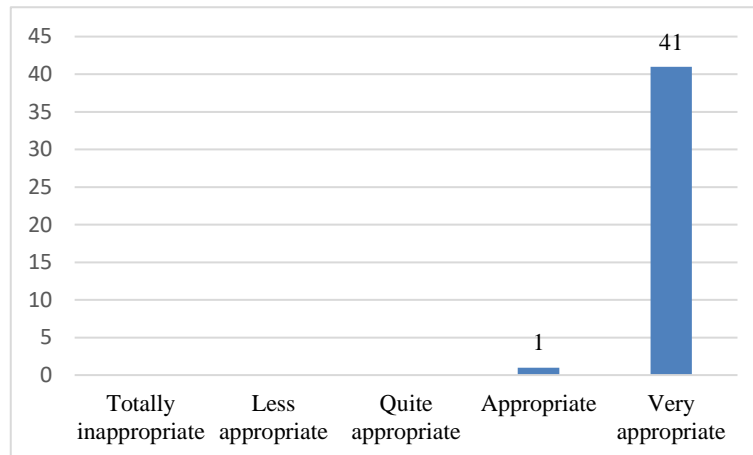


Figure 4. Achievement of Preparedness Planning Aspects

Figure 4 shows data on the achievement of the preparedness planning aspect. From 3 statement items, the answers of respondents who stated that they were very suitable reached 41, while those who were suitable reached 1. According to these results, in percentage terms, the achievement in the aspect of preparedness planning reached 99%. These results show that this aspect still has a gap of 1%. Thus, the preparedness planning aspect still has gaps that schools must improve. The preparedness planning aspect focuses on the planning carried out by schools to realize safer learning facilities so that they can be utilized when a disaster occurs. Preparedness itself is an action that enables governments, organizations, communities, and individuals to be able to respond to disaster situations quickly and appropriately. (Susanti et al., 2014). The commitment built by SD Panggang Bambanglipuro as SPAB also lies in the planning designed to realize safer learning facilities. Preparedness planning is the stage of preparing effective and efficient actions during a disaster, including documents and plans for localized systems and adjustments.

The findings related to preparedness planning noted that SD Panggang Bambanglipuro has no plans in the near future to develop the school building. This is because the building used for learning is still sufficient, even though several rooms at SD Panggang Bambanglipuro have been severely damaged. This condition shows a mismatch between the standard of safer learning facilities and the existing conditions. Building development, when viewed from the conditions that occur, is necessary to make improvements to ensure learning facilities are safe for students. However, preparedness planning does not only focus on the development of education unit buildings. Preparedness planning also includes the layout used by the education unit for easy accessibility and the assessment of disaster risks that may occur in the education unit.

SD Panggang Bambanglipuro has two (two) gathering point locations in the front and back yards of the school, which are easily accessible. In addition, the evacuation routes made are also very accessible to the school community, especially students. The evacuation route to the gathering point at SD Panggang Bambanglipuro is placed in easily readable locations so that in the event of a disaster, the directions can be easily utilized by students to the nearest gathering point. A disaster risk assessment document. According to the disaster risk assessment, SD Panggang Bambanglipuro has

a history of disasters ranging from earthquakes, strong winds, ash rains, and floods to disease outbreaks. The disaster risk assessment also shows the ranking of disaster threats that may occur at SD Panggang Bambanglipuro. In addition, PROTAP (standby procedures) regarding the earthquake and strong wind early warning system, activation of the disaster emergency command system, evacuation, first aid, information and data, student repatriation, and termination of operations have been compiled in the SD Panggang Bambanglipuro SPAB document.

Based on the explanation above, it can be concluded that in the aspect of preparedness planning, there are still gaps because SD Panggang Bambanglipuro does not yet have a plan to develop or repair damaged buildings. However, the absence of such plans is due to external conditions beyond the education unit's control. SD Panggang Bambanglipuro has tried to report the condition to the authorities, but it has not been a priority because it still has enough space for learning activities. In addition, in this aspect, a disaster risk assessment has been carried out so that SD Panggang Bambanglipuro can map the highest potential disasters and anticipate them. The findings show that the highest potential disasters are earthquakes and strong winds. From the mapping, SD Panggang Bambanglipuro has also established fixed procedures that need to be carried out when the disaster occurs. Thus, in the aspect of preparedness planning, although there are still gaps, overall the preparedness planning carried out by SD Panggang Bambanglipuro is quite complete. Achievements in the aspect of preparedness planning can be seen later in the implementation aspect as a form of implementation of the plan that has been proclaimed. The following is the achievement data on the implementation aspect of the Disaster Safe Education Unit Program at SD Panggang Bambanglipuro.

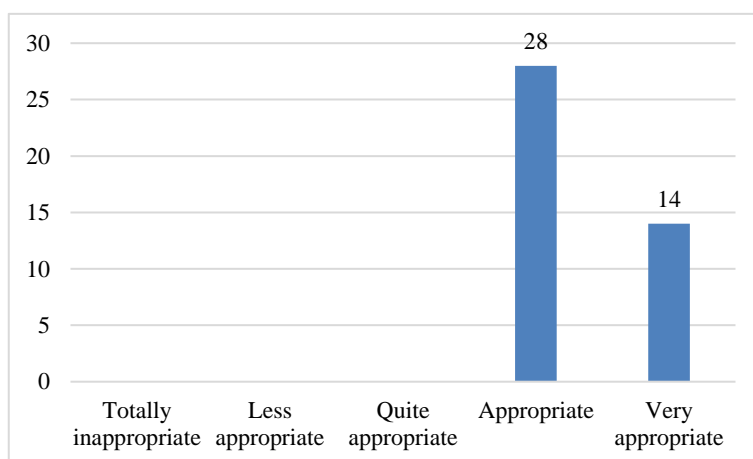


Figure 5. Achievement of Implementation Aspects

Figure 5 shows the achievement data on the implementation aspect of the Disaster Safe Education Unit Program. From the 3 statement items, the answers of respondents who stated that they were very suitable reached 14, while those who were suitable reached 28. According to these results, in percentage terms, the implementation aspect achieved 86%. These results show that this aspect still has a gap of 14%. When compared with the standard and the predicate of achievement, this aspect can be said to have been achieved. The implementation aspect focuses on implementing safer learning facilities in accordance with existing standards. As a result, the implementation aspect necessitates a comprehensive and integrated approach so that schools can create safer learning facilities and ensure optimal preparedness in the face of disasters, thereby protecting the safety and welfare of all school members, particularly students.

The implementation aspect of the safer learning facilities standard has basically been achieved because, based on the findings of the researchers, the achievement has reached 86%, but these results still show a 14% gap that has not been met in achieving the standard. Based on the explanation above regarding the implementation aspect, there are still gaps in the standard of safer learning facilities. This is evidenced by the absence of rehabilitation committee report documents, test reports, and education unit building maintenance procedure documents. Although SD Panggang

Bambanglipuro has a rehabilitation committee, has tested the structure of the building to submit repairs to the office, and maintains the building, in physical form the document was not found while the document is a standard.

Existing standards in the implementation aspect include the education unit rehabilitation committee report, the building structure quality testing report, and the building maintenance procedure document. SD Panggang Bambanglipuro already has a rehabilitation committee, which is taken from the logistics, facilities, and infrastructure team in the SPAB standby team. Furthermore, SD Panggang Bambanglipuro has also conducted building quality testing, but testing is not carried out regularly. The quality testing of buildings that have been carried out by SD Panggang Bambanglipuro is motivated by wanting to submit proposals for the repair of damaged buildings. Building maintenance has also been carried out; independently, SD Panggang once repaired a broken classroom ceiling. However, in addition to non-existent documents, the maintenance that has not been carried out is to hook the cupboard on the wall so that it is potentially dangerous when an earthquake occurs. Therefore, the implementation aspect still has a gap between the standard and the situation in the field. Achievements in the implementation aspect can be proven or reviewed through the monitoring and evaluation aspects of the implementation of the Disaster Safe Education Unit Program. The following are the successes in the monitoring and evaluation aspects of the SPAB program implementation at SD Panggang Bambanglipuro.

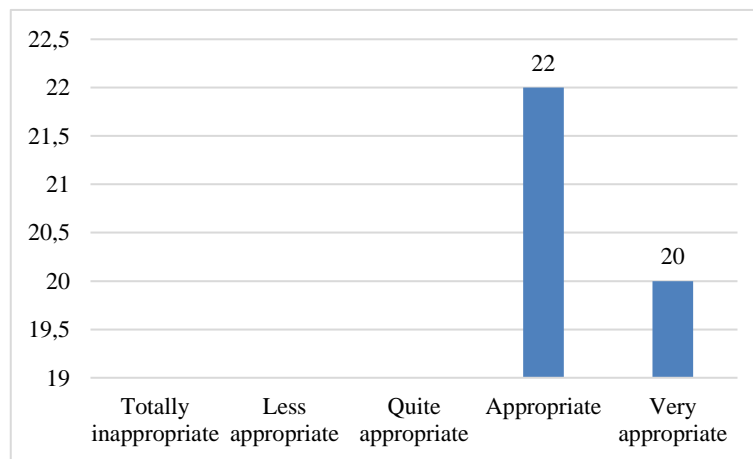


Figure 6. Achievement of Monitoring and Evaluation Aspects

Figure 6 shows data on the monitoring and evaluation aspect. From three statement items, respondents who stated that they were very suitable reached 20, while those who were suitable reached 22. According to these results, the achievement in the monitoring and evaluation aspect reached 89% in percentage terms. These results show that this aspect still has a gap of 11%. Monitoring and evaluation is an important component in ensuring the success of the SPAB program, especially safer learning facilities. The monitoring and evaluation aspect of the safer learning facilities standard has been achieved because, based on the results of the researchers' findings, its achievement has reached 89%, but the results still show an 11% gap that has not been met in achieving the standard. Based on the explanation above regarding the implementation aspect, there is still a gap in the standard of safer learning facilities. SD Panggang Bambanglipuro has carried out a monitoring and evaluation of the implementation of SPAB where safer learning facilities are included. The education office always asks schools to fill in monitoring and evaluation and reports on activities carried out annually. The school also updates the Dapodik page with the latest condition of the education unit. However, the school's data updates have not resulted in the office taking action to rehabilitate some of the damaged school buildings at SD Panggang Bambanglipuro. Informal monitoring is also carried out in the event of a disaster, where the BPBD will contact the school to ask about the condition of the school. In addition, regarding the implementation of simulations,

monitoring is carried out by uploading activities related to SPAB on YouTube and through the InaRisk application.

Based on the explanation above, there are still gaps in the monitoring and evaluation aspects. The evaluation was indeed carried out by updating data on Dapodik, but the data update has not made SD Panggang Bambanglipuro a priority educational unit for rehabilitation because the learning space is still sufficient. This is what causes the monitoring and evaluation aspects to still have gaps, even though SD Panggang Bambanglipuro has carried out evaluations according to existing standards. The results of the monitoring and evaluation aspects of the SPAB program can also be strengthened through the achievements of the resource mobilization aspects in schools. The following is data on the achievements of the resource mobilization aspects at SD Panggang Bambanglipuro.

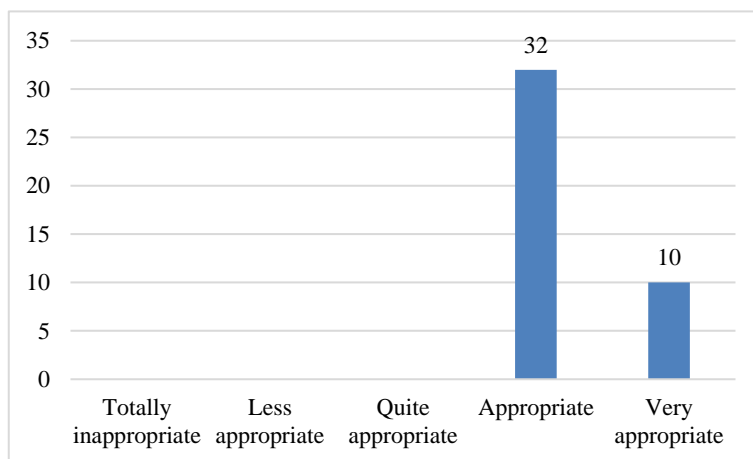


Figure 7. Achievement of Resource Mobilization Aspects

Figure 7 shows the achievement data on the resource mobilization aspect; the appropriate category achieved 32 achievements, while the very appropriate category achieved 10 achievements. Resource mobilization is the process of identifying, allocating, and managing the resources needed to achieve certain goals. The aspect of resource mobilization on the safer learning facility standard has basically been achieved because, based on the researcher's findings, the achievement has reached 84%, but the results still show a gap of 16% that has not been met in achieving the standard. Based on the research findings on the aspect of resource mobilization, it is basically in accordance with the existing standards, but there are still gaps.

The gaps that occurred include the lack of follow-up to the report of building damage made by SD Panggang Bambanglipuro. This is because even though SD Panggang Bambanglipuro has damaged learning rooms, other rooms are still sufficient for learning activities, so the government program to rehabilitate damaged educational unit buildings is prioritized for educational units with limited classrooms. This is certainly very unfortunate because even though they still have enough rooms, the damaged rooms have the potential to endanger students. This situation is what makes this aspect still experience gaps. The next gap in terms of resource mobilization is the lack of cooperation between the teacher council and PRB efforts in educational units. SD Panggang Bambanglipuro, an elementary school education unit, was the first to implement SPAB Mandiri in Bantul Regency. This is certainly an advantage for SD Panggang Bambanglipuro compared to other schools at the same level. Therefore, SD Panggang Bambanglipuro is often an informal source of information for schools that want to implement SPAB because, in fact, regarding the program, they can be asked directly to the local BPBD. Collaboration between teacher councils is also very necessary in DRR efforts in education units because students, especially at the elementary school level, have quite high vulnerability to disaster risk. However, during the implementation of SPAB Mandiri, SD Panggang Bambanglipuro never established cooperation between teachers.

Bantul Regency has four elementary school education units that have implemented SPAB. SD Panggang Bambanglipuro is one of the four schools. Collaboration between teacher councils in

educational units that implement SPAB has not been possible due to differences in regional clusters, so they rarely meet with teachers from schools that implement SPAB. However, SD Panggang Bambanglipuro has a desire for cooperation so that educational units become a safe place for students when a disaster occurs. Based on this explanation, it can be concluded that in the resource mobilization aspect there is still a gap with existing standards.

CONCLUSION

The achievement of safer facility standards in the Disaster Safe Education Unit Program at SD Panggang Bambanglipuro as a whole received the prediction achieved. The attitude and action aspects have been achieved, but there is a gap between the standards and the reality that occurs at SD Panggang Bambanglipuro, namely that there are still teachers who do not understand safer learning facilities. The policy aspect of the education unit has been achieved, but there is a gap between the standards and the reality that occurs at SD Panggang Bambanglipuro, namely that there are still rooms that are not safe for learning. The preparedness planning aspect has been achieved, but there is a gap, namely that there is no development or rehabilitation plan for damaged rooms. The implementation aspect has been achieved, but there is a gap, namely that no rehabilitation committee report documents, test reports, or maintenance procedure documents for the education unit building were found. The monitoring and evaluation aspect has been achieved, but there is a gap, namely that there has been no action from the office regarding data updates carried out by SD Panggang Bambanglipuro. The resource mobilization aspect has been achieved, but there is still a gap, namely that SD Panggang Bambanglipuro has not been prioritized for rehabilitation due to the adequacy of classrooms and the lack of cooperation between the teacher council that focuses on PRB efforts in the education unit.

Based on the results of the study, discussion, and conclusions related to the achievement of safer learning facilities in the SPAB program at SD Panggang Bambanglipuro, an increase in understanding of the overall details of the SPAB program can be made, especially regarding safer learning facilities such as providing education and training so that the SPAB implementation process can be more optimal. Schools need to minimize existing gaps by improving and fulfilling facilities that support the SPAB program so that safer learning facilities can be fully achieved and students' protection rights are fulfilled. The education office should immediately take action on the damage experienced by SD Panggang Bambanglipuro by providing a budget for the rehabilitation of damaged buildings so that they do not have the potential to endanger students, especially if a disaster occurs.

This study is not comprehensive, so further research can be carried out regarding strategies for increasing standard achievements in the Disaster Safe Education Unit Program, case studies of the achievements of each aspect of facility standards, reviewing the achievement of SPAB program facility standards in other schools or higher levels of education, and comparisons. achievement of facility standards in the SPAB Program at primary school level or secondary school level in Bantul Regency, examining the achievement of other standards in the Disaster Safe Education Unit Program in Bantul Regency, examining the overall achievement of standards in the SPAB program in certain areas, this study can also be reviewed through other variables. For example, achieving SPAB standards is linked to school leadership or linked to school management implemented by the leadership.

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