

# Educational Administrator's Perception on Managing Teaching and Learning After A Natural Disaster: A Case Study in Lipis, Pahang

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## Abstract

This study aimed to comprehend a comprehensive perception of educational administrator on managing teaching and learning after a natural disaster. In Malaysia, natural disaster is a common occurrence, Malaysia is affected by numerous natural disaster such as flood, drought, haze and heat wave. These natural disasters have caused numerous issues to the country regarding its development, economy, education and society. The occurrence of natural disaster has impacted education, they have caused school to be closed and school activity to be halted or canceled altogether. In 2021, Malaysia has recorded 1057 cases of flood. This has resulted in crisis in education since huge number of schools has to be closed due this. Utilizing a qualitative design research that targeted informant consisted of head of schools selected from various school that are regularly affected by flood. The informant consists of head of school such as headmaster and principal from a region in Pahang that are regularly affected by flood. In-depth semi-structured interview was used to collect data. The data that was gathered from the interviews were transcribed using thematic analysis and themes were extracted to answer all of the research questions. The findings had shown the importance of support from various parties when it comes to managing teaching and learning after a natural disaster. It also had highlighted the challenges that educational administrator faced when managing teaching and learning after a natural disaster and interesting suggestion that can be consider to improve on the situation in the future.

## Introduction

Malaysia is a country that experience numerous natural disaster every year. Malaysia's position which is situated in the equator causes Malaysia to be exposed to everchanging climate and unpredictable weather. Flood is one of the most common and frequent natural disaster that occur in Malaysia. In 2021 alone, there were 1057 cases of flood recorded in Malaysia. These cases had impacted Malaysian economy, development and also education. Lately, natural disaster has garnered a lot of attention from various parties whether it is the government or private. The impact of natural disaster such as flood, earthquake, landslide and drought are becoming a major concern because it can happen anytime and anywhere (Subhani, 2016). Malaysia has enacted a policy that enable the country to managed its

national disaster systematically and effectively. However, it still can't escape from facing natural disaster especially flood that happen every monsoon season (Izzatie, 2022).

### **Problem Statement**

Kuala Lipis is a district that is located in the state of Pahang in the eastern region of Malaysia. Kuala Lipis are on the receiving end of heavy rain especially during the monsoon season and this has caused natural disaster such as flood to occurs quite regularly in the district. Since 2010 to 2022, there has been a recorded flood event almost every year except in 2012, 2016 and 2020. These flooding has cause severe loss and damages to the district. Apart from that, it also affected the everyday lives of people. The flood that occurs regularly cause disruption to everyday activities such as school and works. Numerous schools in Kuala Lipis were affected by flood. In total, close to 50 schools were affected by flood in Kuala Lipis every year. These school were either submerged by flood or have their transportation line severed. Among them are SMK Clifford, SK Kerambit, SK Jeram Landak, SMK Kerambit, SK Mela, and SK Kuala Medang. This has affected a significant number of students. In 2014, approximately close to 3000 students were affected by the flood due to the damages that the school sustained after the flood.

The aftermath of flood has caused a lot of challenges to students, parent and teachers. This study will provide a better understanding of the perception of educational administrator when managing teaching and learning after a natural disaster. This study will be able to provide solution and suggestion on how to improve on the situation in the future. A better guidelines and policy can be implemented in order to ensure that the education process is not affected by events such as flood in the future.

### **Research Objective**

- 1) To further comprehend the issues that educational administrators face when managing teaching and learning during after a natural disaster.
- 2) To grasp the methods taken by educational administrators in handling the challenges related with managing teaching and learning after a natural disaster.
- 3) To contribute to improvements to the management of teaching and learning after a natural disaster.

### **Research Question**

1. What are the issues that educational administrators face when managing teaching and learning after a natural disaster?
2. How do educational administrators handle challenges in managing teaching and learning after a natural disaster?
3. How can one improve the management of teaching and learning after a natural disaster?

### **Literature Review**

A natural disaster is the occurrence of an extremely hazardous event that impacts communities, causes damage, disruption, and casualties, and renders the affected communities unable to function normally without outside assistance (Twig, 2007). A natural hazard is an atmospheric or hydrological and geophysical event (e.g., Flood or Drought, Earthquake, Tsunami, Landslip, Windstorm) that has the potential to cause harm or loss. A natural disaster is an occurrence caused by nature that overpowers local resources and

jeopardizes the community's ability to function and safety is referred to as a natural disaster. Disasters typically serve as the ultimate test of a community's ability to respond to emergencies. An emergency that was well-planned and thoughtful plan will be able to swiftly respond to unexpected events and difficulties (March, 2002).

Malaysia is typically impacted by mild environmental disasters, but seldom by major calamities. The frequency and severity of environmental disasters have increased in Malaysia. Tsunamis, floods, and landslides are a few examples of environmental catastrophes that have affected this nation. However, disasters like tsunamis are unpredictable and fierce, making preparation and defense very challenging. Thus, the Hyogo Framework, a 10-year global plan for reducing the risk of natural disasters, had been approved by 168 Governments in January 2005 (Haliza, 2014).

Flood is one of the most frequent natural disaster that occur in Malaysia. Flood is caused by climatology or climate such as temperature, rain distribution, evaporation, wind movement and the earth's natural surface condition (Chan, 2015). Generally, flood is the flow of the river water that are relatively bigger compared to the regular circumstances. It is usually caused by rain that fall upstream or continuously at a certain area causing the overflow from the river channel dan flooding the nearby area (Rejang, 2017).

Flood can be classified to several types such as flash flood, mudflows, monsoon flood, coastal flood, urban flood and dam rain flood. There are only a few types of floods that occurs in Malaysia, these are flash flood, mudflows and monsoon flood (Ang, 2019). There are several factors that causes flood in Malaysia, among them are high tide, shallow river that was caused by deposition process, strong water flow that are caused by heavy rain or mudflow. Another reason for flood in Malaysia is due to the high volume of rain that we receive every year, on average, Malaysia receives at least 2940 mm of rain a year with the tabulation differing in each state. The difference in pattern of rain in each states causes flood in some state due to receiving a huge volume of rain in a prolonged period of time and could go on for days (Jabatan Saliran dan Pengairan Malaysia, 2017).

The destruction that are caused by flood are not only recorded in Malaysia but all around the world. Flood has been stated as the third biggest natural disaster beside earthquake and volcanic eruption that causes the loss of life dan the destruction of property (World Meteorology Organization, 2020). The frequent occurrence of flood today in Malaysia has created a sense of uneasiness among citizen living in the high-risk area. Flood didn't only cause destruction and loss of properties but also hindered everyday activities which includes education. Every time a natural disaster such as flood occurs it will cause school closure due to either the school is directly affected by the flood such as being submerged or the school building being used as the flood victim relief center. Due to this, it is imperative that those who are affected by flood to be informed, aware and ready about it in order to reduce the impact of it (Izzatie, 2022).

There is need for more research to be carried out regarding flood in Malaysia, this is due to the frequent nature of it. In a speech on the 3<sup>rd</sup> March 2023, the Yang Dipertuan Agong of Malaysia, Al-Sultan Abdullah Ri'ayatudding Al-Mustafa Billah Shah Ibni Al- Marhum Sultan Haji Ahmad Shah Al-Musta'in Billah hoped that the government can conduct research to identify the cause of flood in Pahang (Abdullah, 2023). This is that to find both long- and short-term solution. Related to education, there is a need to conduct a comprehensive study in order to better prepared school and institution of learning when dealing with flood in the future. There is very limited amount of study that were carried out to understand managing

teaching and learning during a natural disaster especially from the perspective of the academic administrator.

The impact of natural disaster can vary and be extremely extensive. Natural disaster will affect various aspect of our lives including education. Natural disaster main impact is towards the human capital of a country. It is widely debated that natural disaster can have negative and positive impact on a country's GDP (Skidmore & Toya, 2002, Raddatz, 2007). Both sides take into account how the long-term effects of natural disaster shocks on capital (physical and human) damage could either reduce productivity or drive the replacement of outmoded capital with more modern technologies (Onigbinde, 2018).

A portion of the literature examines how mortality threats from natural disasters may reduce education spending in disaster-prone nations (Cuaresma, 2010). The 2005 Pakistan Earthquake resulted in the deaths of 853 teachers and 18,095 students, the destruction of more than 7,500 schools, and the failure of reconstruction efforts to rebuild capacity and educational infrastructure (Asian Development Bank and The World Bank, 2006).

Growth has been attributed in large part to education. According to labour productivity and social outcomes, human capital accumulation, which is described by investments in education, is a key driver of economic advancement (Barro and Lee, 2013). However, an abundance of highly educated human resources may be constrained by numerous natural disaster shocks. The influence of hazards such catastrophic shocks on household income, demography, policy change, etc., on educational achievements is one of the challenges that human capital accumulation faces. These results, which are measured by school enrollment and achievement, grade progression, academic performance, etc. (UNDP, 2005), make it difficult for households and the government to decide whether to invest in human capital.

## **Methodology**

This study utilized the qualitative method as the data collection method. The "why" and "how" of a phenomenon's description and interpretation are of interest to researchers in qualitative research. In order to shed light on the phenomenon, it employs a methodical methodology that directs the examination of a subject through natural and direct engagement with the informants. Qualitative research can investigate a range of human interests or points of view using interpretive and practical interviews. By examining the respondents' subjective viewpoints, qualitative research seeks to make sense of the respondents' experiences. It is a naturalistic method of conducting empirical research that gives respondents' viewpoints precedence over the researcher's (Boswell & Babchuk, 2022).

Case studies are a qualitative research method where a programme, event, activity, process, or one or more people are thoroughly investigated. Researchers gather comprehensive data over an extended period of time utilising a variety of data collection techniques for the case(s) that are constrained by time and activity (Priya, 2020). A case study is an empirical investigation that looks at a phenomenon in its actual setting. As case study research entails an in-depth examination of a phenomenon, many data collection techniques are used. It must be underlined that, as Yin (2009) pointed out, a case study is not a technique for gathering data but rather a plan or strategy for researching a social unit.

## **Justification for Selection of Lipis as Case Study**

Lipis is a district situated in the state of Pahang in the east coast of Malaysia. The east coast of Malaysia is frequent receiver of heavy rain during the monsoon season and this has caused frequent flooding in the district. Lipis experience flood on a yearly basis and this has

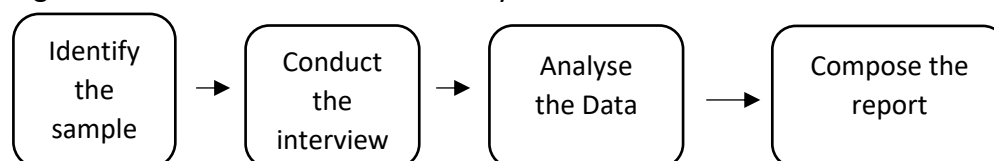
caused numerous challenges to the resident. Every year, numerous schools in Lipis is affected by flood. In 2014, the flood causes all school in Kuala Lipis, which is the capital of Lipis to closed and they faced a lot of difficulties to restart the school due to the extensive damaged caused by the flood. Due to this reason, Lipis was selected to conduct this study.

### Sample Selection

The samples for this study were selected among school administrator in Lipis. Purposive sampling method was utilized in this study. The samples were selected form those who carry administration position in the schools that were affected by flood. Principles, headmaster and Guru Penolong Kanan satu (GPK 1) was selected as sample since they are responsible with the academic aspect of the schools. They are in charge of all things related to academic. Principle and headmaster are in charge of all aspect of a school administration meanwhile GPK 1 is in charge of handling the curriculum aspect of administration. Due to this reason the samples for this study were selected. 10 samples were selected for this study.

### *The Interview Procedure*

Semi structured interview was conducted in order to obtain the data. 10 subjects were interviewed in this study. All of them are school administrator from various schools in Lipis that was affected by flood. The interviewer asks six questions with the goals to answer the five research questions. To ensure the validity of the interview question, the question was checked by an expert. The interview was conducted in Bahasa Malaysia. The main reason for this was to make sure that the subject will be able to understand the question better and to avoid any confusion regarding the matter that was up for questioning. The researcher provided explanation in Bahasa Malaysia and the data obtain from the interview will be translated into English. To avoid the data from being misinterpreted the data was checked by English language lecturer. The data is then checked by another expert of the field of education management. This is to ensure the validity of the data.



### Data Analysis

Thematic analysis was utilized in this study to analyze the data. The finding of the research discovers 5 themes. The themes are based on the research questions.

Research question 1: What are the issues that educational administrators face when managing teaching and learning after a natural disaster?

Theme 1: The teaching and learning have to be delayed.

Sub-theme 1: Damaged sustained by the school causes lesson to be delayed because there is no venue to conduct classes.

Sub-theme 2: Students were not prepared to begin learning due to the loss of all the basic school necessities.

Theme 2: The students were not ready to resume their lessons.

Sub-theme 1: Most of the student were unable to resume their lesson right away because they didn't have the equipment and resources to resume their lessons.

Theme 3. Teachers were not ready to resume lessons.

Sub-theme 1: Teachers were not prepared with alternative learning method such as online learning.

Sub-theme: 2: Teachers were also affected by the natural disaster.

Research question 2: How do educational administrators handle challenges in managing teaching and learning after a natural disaster?

Theme 4: Help from other parties are needed in order to handles the challenges in managing teaching and learning after a natural disaster.

Theme 5: Changing the leadership style

Sub-theme1: The need to be flexible with the teaching staff.

Sub-theme2: The need to come up with different idea on how to conduct classes.

Sub-theme3: The need to involves everyone in the decision-making process.

Research Question 3: How can one improve the management of teaching and learning after a natural disaster?

Theme 6: Government need to come up with a guidelines and framework on how to manage teaching and learning after a natural disaster.

Sub-theme 1: Collaborative effort from relevant parties such as BOMBA, JPAM, TNB and KPM are needed in order to manage the aftermath of a natural disaster better.

Sub-theme 2: Local community and organization such as PIBG and JKK need to be included in the crisis management planning.

Theme 7 : There is a need for a more long-term planning when it come to handling this issue.

Sub-theme 1: Some of the school who are affected should be relocated.

Theme 1: The teaching and learning have to be delayed.

Theme 1 discuss on the main challenges that academic administrator faced when managing teaching and learning after a natural disaster. Most of the subject stated that the main challenges that they faced was the delayed to the teaching and learning caused by the damages sustained due to the flood. Informant 01 stated:

*"We can't start class because the classroom was severely damages. All the appliances such as table, desk, whiteboard, fan and lamp were all damages in the flood. Apart from that, some of the classrooms were declared unsafe by TNB and JKR even though they were cleaned. It would take months for the classroom to be ready and this causes teacher to find other alternative venue to use as a classroom such as the canteen and science lab. In my school, we have to use an open space in our assembly field as a classroom."*

sub-theme 1: Damaged sustained by the school causes lesson to be delayed because there is no venue to conduct classes.

Half of the subject (5) stated that it takes time to restart teaching and learning after natural disaster. Informant 02 describe how trying to restart lesson is so challenging due to the enormous damage caused by the flood:

*"The damages sustain by my school who was completely submerged during the flood causes teaching and learning to be halted. We spend a lot of time on cleaning the classroom and replacing all the appliances such as fans, table and whiteboard. Benda-benda ni penting untuk pembelajaran dan pengajaran."*



sub-theme 2: Students were not prepared to begin learning due to the loss of all the basic school necessities.

3 subjects noted that most student who were affected by the flood doesn't have the capacity nor the resources to procure the basic necessities that is required to get back to school. Informant 06 stated explain how the socioeconomic status affected the ability of some family to obtain the basic school supplies:

*"Some of the families here are from the low-income status, so buying all the necessities for school become secondary since they need to spend it elsewhere. Most of them focus on rebuilding their life first by fixing their house. They have to wait for a while to get all the basic school necessities, this caused their lesson can't begin properly."*

Theme 2: The students were not ready to resume their lessons.

Theme 2 discuss on the main challenges that academic administrator faced when managing teaching and learning after a natural disaster. Most of the subject stated that the main challenges that they faced was the delayed to the teaching and learning caused by the damages sustained due to the flood. Informant 01 stated:

*"We can't start class because the classroom was severely damages. All the appliances such as table, desk, whiteboard, fan and lamp were all damages in the flood. Apart from that, some of the classrooms were declared unsafe by TNB and JKR even though they were cleaned. It would take months for the classroom to be ready and this causes teacher to find other alternative venue to use as a classroom such as the canteen and science lab. In my school, we have to use an open space in our assembly field as a classroom."*

Sub-theme 1: Teachers fall behind in their syllabus and there is no alternative for them to conduct lesson.

2 subjects stated that several of their teachers struggle to keep up with the teaching syllabus. They noted that the teachers were completely lacking in guidance and capacity to conduct lessons due to the issues causes by the flood. Informant 07 explains:

*"Some of my teachers are completely clueless on how to conduct lesson, they come to me asking about the syllabus that were left behind due to the flood. We also have no idea how to conduct classes because we don't have the capacity to do online classes."*

Sub-theme 2: Students were left behind in education because their parents can afford to send them to school.

3 subject mentioned that another challenges that they faced is that some of the students were unable to attend school and class due to their financial restrictions. In certain area, some family who has very low income were unable to provide necessary tools for their children to go to school. Informant 06 explains:

*"Most of our students come from family with low-income status, so when flood hit their home, they lost almost everything. These families struggle to get back up on their feet and they focused more on rebuilding their life. This caused them to neglect their children education since they deemed it to be secondary in their life objectives. Trying to get the students to come back to school prove to be very challenging."*

Theme 3: Teachers were not ready to resume lessons.

4 subjects stated that their teachers were not ready to resume lessons due to several factors. Some of the teachers was also severely affected by the flood due to the severity of it. Informant 04 stated:

*“Several of my teachers has their house completely submerged during the flood. They can’t resume classes because they have to attend to their own issue first. Some of the teachers are simply not equipped with the knowledge and skills to do the alternative learning method such as online learning”.*

Sub-theme 1: Teachers were not prepared with alternative learning method such as online learning.

3 of the subjects stated that their teachers are not well equipped don’t have the knowledge to conduct alternative learning such as online learning. Informant 05 stated:

*“When we try to use online learning some of the teachers complains that they don’t have the equipment and tools such as internet and pc. Apart from that, they have no idea how to utilize apps such as google meet because they have not use it before”.*

Sub-Theme 2: Teachers were also affected by the natural disaster.

All of the subject stated that their teachers were affected by the flood in one way or another. Informant 01 noted:

*“Majority of my teachers were affected by the flood. Some have their house submerged, some have their house completely cut off from anyone and this cause them to be unable to come to school. This has cause them to be unable to resume their duty”.*

Theme 4: Help from other parties are needed in order to handles the challenges in managing teaching and learning after a natural disaster.

6 of the subjects stated that assistance from other parties were needed in order to handle the challenges in managing lesson after a natural disaster. Assistance from the relevant parties such as JKR, BOMBA, TNB and KPM are essential in ensuring that the lessons can resume quickly and effectively. Informant 04 noted:

*“Assistance from JKR, BOMBA, TNB and KPM were very important because without the assistance from these parties. Without the parties we cannot get the classes ready for lessons. BOMBA are essential in the cleanup meanwhile JKR and TNB were in charge in making sure that the building is safe and ready to be use.”*

Theme 5: Changing the leadership style.

6 of the subjects noted that they have to change their leadership approach due to the unprecedented nature of the circumstances in the recent years. Informant 06 noted:

*“I have to change my approach when it comes to how I communicate with my subordinates, I have to figure out new approach to handle the problem that arise due to the natural disaster that happens”.*

Sub-Theme 1: The need to be flexible with the teaching staff.

3 of the subjects noted that they were required to be more flexible with their staff when it comes to making decisions. They have to allow their staff to make decision themselves and goes along with the request of the staff. Informant 02 noted:



*“To ensure the morale of my staff are good. I have to be more flexible when it comes to communicating with them. I also have to allow them to be involved in the decision-making process. This is because getting information from those who are hands on in this situation is important to ensure the best possible outcome”.*

Theme 6: Government need to come up with a guidelines and framework on how to manage teaching and learning after a natural disaster.

Most of the subjects (7) stated that the government must come up with a new and updated guidelines when it comes to managing teaching and learning after a natural disaster. Due to the recent changes in the weather pattern and the advancement in technology there is a need in updating the guidelines and introducing a new one. Informant 10 explain that:

*“Government bodies such as KPM need to update and introduce new guidelines on how to manage teaching and learning after a natural disaster. Back in the days, flood don’t affect student’s lesson that much because they happen during the school break but now it happens anytime. Updating new guidelines such as introducing new method of teaching such as the application of technology will help teachers and administrator to manage teaching and learning better after a natural disaster.”*

Sub-Theme: Collaborative effort from relevant parties such as BOMBA, JPAM, TNB and KPM are needed in order to manage the aftermath of a natural disaster better.

4 subjects also noted that there is a need for a more comprehensive collaboration plan between the school and other relevant parties such as JKR, TNB and PPD in order to help them manage teaching and learning after a natural disaster. These relevant parties are responsible in making sure that the school can function to normal after the natural disaster. Informant 03 noted that:

*“We need to have a plan that involved other relevant parties such as JKR, TNB, BOMBA and PPD. These parties play a crucial role in ensuring that the school can resume its activity. We need a collaborative plan so that the response time from these agencies can be quicker and more coordinated”.*

Sub-Theme: Local community and organization such as PIBG and JKK need to be included in the crisis management planning.

3 of the subjects stated the importance of local community and organization such as PIBG and JKK in helping the school manage lesson after a natural disaster. Informant 09 stated that:

*“My school is very lucky that our local community and PIBG were very much involved in anything that the school does. The local villagers who were the one who informed the school administrator about the situation and they are also the one who helped move all the essential item to a higher ground. With the help of the villager, my school was able to avoid a bigger loss in equipment such as computers, printer and other appliances. PIBG organize a gotong royong after the flood subsided and they also provided some fund to the severely affected students.”*

Theme 7: There is a need for a more long-term planning when it comes to handling this issue.

7 of the subjects stated that there is a need for a more long-term planning when it come to handling this issue. Informant 09 stated:

*“The higher up must come up with long term plan in order to make sure that we can handle this issue better. Solutions such as relocation and redevelopment of the schools can be taken. This is because natural disaster that occurs over the past 5 years has become more unpredictable and more severe”.*

### **Discussion**

The finding of this study found that there is a need to create a procedure and guideline on how to manage teaching and learning after a natural disaster. The changes in weather pattern have created a need to revise and review the current policy on managing teaching and learning after a natural disaster. Even though most of the administrator in Lipis has become accustomed to flood that happen frequently, they admit that the recent event has become severe and unpredictable. The study also found that there is a need for a more collaboration and coordination with several government agencies in order to manage teaching and learning better. There researcher also found that there is a need for a more comprehensive assessment on the impact of flood towards several schools in Lipis in the future. There is a possibility that the impact of flood in Lipis will become much more severe in the future if we look at the current weather trend.

The research also finds that there is a change is leadership style among the administrator when they have to deal with the flood. This is probably due to the unique circumstances that they are in that require a different approach to leadership. Among changes noted during the study was the utilization of transformational leadership, transactional leadership and servant leadership. Most samples noted that they have to change their management style in order to adapt to the situation. There is a need to explore how the changes of leadership styles affected the subordinate and the effectiveness of the changes.

### **Conclusion**

This study showed that there is a need to come up with a more comprehensive and innovative way to manage schools who are affected by flood on a regular basis. The changes in weather pattern have made this issue to be more devastating and impactful every year. There is a need for a more comprehensive planning in order to resolve this matter. Every player such as government and local community involved in this issue need to come up with a solution. The government need to conduct an assessment of every school who are affected by flood and come up with a more affirmative action plan.

The study highlighted the important of adapting new method of management when it comes to managing teaching and learning after a natural disaster. The application of servant leadership when it comes to managing teaching and learning after a natural disaster open ups new area that can be explored through further research. This research can help educational administrator explore new approach to managing education.

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