EduBasic Journal: Jurnal Pendidikan Dasar
Vol. 5 No. 1, April 2023, pp. 53-60

https://ejournal.upi.edu/index.php/edubasic

Storytelling Method Influence on the Understanding of Flood Mitigation in Children Aged 5-6 Years in Wanasalam Sub-district

Arni Haryani[1]✉, Fadlullah[2] & Laily Rosidah[3]

[1]✉Universitas Sultan Ageng Tirtayasa, 2228180054@untirta.ac.id, Orcid ID: 0009-0009-9309-9583
[2] Universitas Sultan Ageng Tirtayasa, fadlullah@untirta.ac.id, Orcid ID: 0009-0002-9529-8980
[3] Universitas Sultan Ageng Tirtayasa, laily@untirta.ac.id, Orcid ID: 0009-0008-8591-849X

Article Info

History of Article
Received:
16 December 2022
Revised:
30 March 2023
Published:
15 April 2023

Abstract

Flood mitigation is crucial to be introduced in early childhood learning, considering that early childhood victims are vulnerable to disasters. Flood mitigation is vital since the disaster will impact health, physical condition, and continuity of education. This research aims to find out to what extent the effect of the storytelling method on the understanding of flood management in early childhood. This study used a quantitative approach with the experimental method by two samples, namely the experimental and the control groups. Each group consisted of 20 children who were given different treatments and then provided a questionnaire to measure the child's ability to understand disaster mitigation. Based on the calculation results of the paired sample t-test in the experimental group, the Sig (2-Tailed) had a value of 0.000 <0.05, so there was a significant effect; thus, H_0 was rejected, and H_1 was accepted. Furthermore, after being given treatment in the experimental group from pre-test to post-test, the change from pre-test to post-test increased by 31.45. Meanwhile, the control group's change from pre-test to post-test rose by 12.30. It is also known that the most significant change occurred in the experimental group with the treatment method of telling stories about understanding flood mitigation. For this reason, it can be concluded that there is an effect of the storytelling method on flood mitigation in early childhood. Storytelling could be an appropriate alternative to introduce awareness in another disaster mitigation.

Keywords: Flood Mitigation, Storytelling Methods, Early Childhood

How to cite: Haryani, A., Fadlullah, F., & Rosidah, L. (2023). Storytelling method influence on the understanding of flood mitigation in children aged 5-6 years in Wanasalam Sub-district. *EduBasic Journal: Jurnal Pendidikan Dasar, 5*(1), 53-60.

e-ISSN: 2549-4562, p-ISSN: 2987-937X

Info Artikel

Riwayat Artikel
Diterima:
16 Desember 2022
Direvisi:
30 Maret 2023
Diterbitkan:
15 April 2023

Abstrak

Mitigasi banjir sangat penting untuk dikenalkan dalam pembelajaran anak usia dini, mengingat anak usia dini korban rentan terhadap bencana. Mitigasi banjir sangat penting karena bencana akan berdampak pada kesehatan, kondisi fisik, dan kelangsungan pendidikan. Penelitian ini bertujuan untuk mengetahui sejauh mana pengaruh metode storytelling terhadap pemahaman pengelolaan banjir pada anak usia dini. Penelitian ini menggunakan pendekatan kuantitatif dengan metode eksperimen dengan dua sampel yaitu kelompok eksperimen dan kelompok kontrol. Setiap kelompok terdiri dari 20 anak yang diberikan perlakuan berbeda kemudian diberikan kuesioner untuk mengukur kemampuan anak dalam memahami mitigasi bencana. Berdasarkan hasil perhitungan uji-t sampel berpasangan pada kelompok eksperimen diperoleh nilai Sig (2-Tailed) sebesar 0,000 < 0,05 sehingga terdapat pengaruh yang signifikan; dengan demikian, H_0 ditolak, dan H_1 diterima. Selanjutnya setelah diberikan perlakuan pada kelompok eksperimen dari pre-test ke post-test, perubahan dari pre-test ke post-test meningkat sebesar 31,45. Sementara itu, perubahan kelompok kontrol dari pre-test ke post-test naik pada pukul 12.30. Diketahui juga bahwa perubahan yang paling signifikan terjadi pada kelompok eksperimen dengan perlakuan metode bercerita tentang pemahaman mitigasi banjir. Untuk itu dapat disimpulkan bahwa terdapat pengaruh metode storytelling terhadap penanggulangan banjir pada anak usia dini. Bercerita bisa menjadi alternatif yang tepat untuk memperkenalkan kesadaran dalam mitigasi bencana lainnya.

Kata Kunci: Mitigasi Banjir, Metode Bercerita, Anak Usia Dini

Cara Mensitasi: Haryani, A., Fadlullah, F., & Rosidah, L. (2023). Storytelling method influence on the understanding of flood mitigation in children aged 5-6 years in Wanasalam Sub-district. *EduBasic Journal: Jurnal Pendidikan Dasar, 5*(1), 53-60.

e-ISSN: 2549-4562, p-ISSN: 2987-937X

INTRODUCTION

Indonesia is one of several countries with a high potential for natural disasters. Indonesia consists of rainy and dry seasons, and Indonesia has a tropical climate. This is because Indonesia is geographically located on the equator. Hence, it is unsurprising that there will be fires and drought during the dry season, but there will be high rainfall during the rainy season. Health Crisis Center reported in *Buku Penanggulangan Krisis Kesehatan untuk Anak Sekolah [Health Crisis Management Book for School Children]* that in Indonesia, there are at least 5,590 main rivers spread across Indonesia, and 600 of them have the potential to cause flooding. In addition, flood-prone areas reach 1.4 hectares.

The impact of the disaster that occurred can be felt psychologically by all groups. One of the impacts of the disaster befalls early childhood. Early childhood is one of the victims vulnerable to disasters. Children who become victims due to ignorance and physical weakness when facing a disaster are high. As stated in Chapter 1 Article 1 Number 15 Regulation of Government of The Republic of Indonesia Number 21 of 2008 concerning the Implementation of Disaster Management, "vulnerable groups are infants, children under five, children, pregnant and lactating women, the disabled, and the elderly."

On the other hand, the storytelling method provides learning experiences for children by bringing stories to children orally (Indarwarti, 2017). The story must attract the child's attention and cannot be separated from the child's educational goals. Hajrah (in Elia, 2019) emphasizes that through telling stories, children will gain experience and knowledge, which will be conveyed through stories orally. Telling stories does not only use book media but can also use hand puppets or picture media. Meanwhile, according to Ningtyas & Risina (2018), disaster mitigation is defined as any ongoing action taken to reduce or eliminate long-term risks to property and human lives. In this regard, mitigation can also be interpreted as a mechanism so that people can avoid a disaster's impact with the potential to occur.

Concerning disaster mitigation in early childhood, Proulx & Aboud (2019) revealed that early childhood mitigation involves children to reduce disaster risk, namely disaster identification and training. According to Yanuarto et al. (2019), flooding is when water floods an area that is usually not inundated with water for a certain period.

In this case, schools play an essential role in reducing disaster risk. Thus, early childhood education institutions are the level of education closest to the community (Qurrotaini et al., 2022). Apart from the total contribution of parents to the education system, the implementation of early childhood education in Indonesia is still primarily community-based. Mitigation learning in early childhood education can be carried out in solid and concrete learning situations. Quoting Lai & La Greca (2020), children are more likely to be affected when a disaster occurs. In addition to the immediate trauma and harm caused by exposure to natural disasters, children can also suffer long-term physical, psychological, and educational consequences (Nur & Vicky, 2022).

Lestari (2017) stated that the awareness to be responsive when facing floods and landslides must be increased again to develop children's understanding of natural disasters, especially floods, and landslides. Media is needed to be carried out through meaningful teaching using methods that can increase insight into natural disasters, one of which is the storytelling method (Kurnia, 2021). Storytelling is about actions that aim to share things experienced (Rizqiyani & Azizah, 2018). The story conveyed can bring the listener into fantasy to understand an event or event. Indeed, telling stories is fun for children.

Specifically, Wanasalam Sub-district is one of the sub-districts in the southern part of Lebak Regency. Wanasalam Sub-district is one of the sub-districts prone to disasters. The most common disaster is flooding. At least five villages in Wanasalam Sub-district always flooded: Karang Pamidangan Village, Bejod Village, Cipedang Village, Sukatani Village, and Cisarap Village, due to overflow from the Cibinuangen and Cibaliung Rivers. The importance of disaster mitigation in the Wanasalam Sub-district is an initial step in disaster management that occurs in disaster-prone areas. Lack of public awareness regarding disaster mitigation impacts the

number of victims due to the disaster. Even more, for early childhood, in research conducted by Atmojo (2020), early education about disaster mitigation is crucial to be taught to society in general and children in particular. Thus, if a disaster occurs, the community and children can save themselves; that way, it will be beneficial in reducing the death toll.

As a disaster-prone area frequently experiencing floods, it is vital to carry out flood mitigation, especially for early childhood in Wanasalam Sub-district, an area close to rivers and beaches. Therefore, it is unsurprising that during the rainy season, Wanasalam Sub-district always experiences flooding. Therefore, the researchers are interested in the influence of the storytelling method on understanding flood mitigation in children aged 5-6 years in the Wanasalam sub-district.

Previous researchers have extensively researched research on mitigation for early childhood. Putri (2019) used a storytelling method using audio-visual media to increase early childhood understanding of natural disasters. Furthermore, Nasrullah et al. (2021) employed the development of comic media to increase children's understanding of flood preparedness. Then, a study conducted by Agrestin & Maulidiyah (2021) utilized the development of big-book media on flood disaster knowledge in children. This study used different research, in which the researchers employed storytelling methods assisted by media images to tell stories about the understanding of flood mitigation in children aged 5-6 years, focusing on flood disaster preparedness, i.e., how to mitigate before floods, during floods, and after floods. This study thus aims to determine the influence of the storytelling method on understanding flood mitigation in children aged 5-6 years in the Wanasalam Sub-district, considering the importance of disaster mitigation as early as possible.

METHODS

This research used the experimental method. In the experimental method, there are control and experimental groups. In the control group, conventional teaching methods were used, namely lectures or non-virtual learning. Meanwhile, in the control and experimental groups, pre-tests were held (to determine whether their abilities were homogeneous) and post-tests (to determine their mastery after the end of the learning process regarding the material applied).

The variable measured was knowledge of flood mitigation in early childhood, with indicators: how to prevent flooding, what to do when a flood occurs, and what to do after a flood. The way to measure these flood mitigation variables was by using tests. The assessment scores employed were BSB (Very Good Development) with a score of 4, BSH (Developing According to Expectations) with a score of 3, MB (Starting to Develop) with a score of 2, and BB (Not Developed) with a score of 1.

This study used a pre-test-post-test control group design. Following Sugiyono's theory in *Quantitative, Qualitative, and R&D Research Methods* that in this design, two groups are randomly selected and then given a pre-test to determine whether there is a difference in the initial state between the experimental and the control groups. Meanwhile, the control and experimental classes were given initial observations (pre-test) before treatment to learn about understanding flood disaster mitigation. Then, treatment was given to the experimental class using the storytelling method. The pre-test and post-test results were used as a reference for obtaining research conclusions by analyzing the achievement data of the two groups.

Then, a hypothesis test was carried out to find out the results of comparing data before and after being given treatment and compare the results of the experimental and the control classes. Testing this hypothesis employed data analysis techniques paired sample t-test. Data analysis was related to the calculation of answering the problem formulation and submitting the proposed hypothesis. Paired sample t-test is utilized to determine whether two paired samples have an effect, with the following criteria. If the value of Sig (2-tailed) < 0.05, there is a significant effect between the pre-test and post-test data results for the experimental and the control classes, whereas if the value of Sig (2-tailed) > 0.05, there is no effect on the pre-test and post-test data results

between the experimental and the control classes.

RESULTS AND DISCUSSION

This research was conducted at PAUD Nurul Huda, located at Kp. Sinar Bakti, Ds. Cipedang, Wanasalalm Sub-District, Lebak-Banten. In each class, the age range was 5-6 years. This research was carried out in four stages: the instrument trial stage, the pre-test stage, the treatment stage, and finally, the post-test stage.

Before conducting the research, the researchers tested the instrument to prove whether the data were valid and reliable for use as a research guide. At the trial stage of this instrument, it was carried out at the PAUD Maulana Yusuf. The samples taken were class zero, with an age range of 5-6 years, consisting of 20 people; it was the same as the number of people who would be studied at PAUD Nurul Huda.

After testing the instrument, four of the 19 statements were invalid, namely statement numbers 9, 12, 18, and 19, because the r-count was smaller than the r-table with a significant level of 5%; with the number of N = 20, it was 0.444. After testing the instrument, it was found that there were four invalid items.

This study used the pre-test-post-test control group design. In this design, two groups were selected randomly and then given a pre-test to determine whether there was a difference in the initial state between the experimental and the control groups. The researchers continued to collect the initial data, namely the pre-test in the experimental and control classes, by providing activities related to flood mitigation in early childhood.

Furthermore, researchers gave different treatments in the experimental and control classes. In the experimental class, treatment was given using the storytelling method for early childhood, whether using media tools (Figure 1). Meanwhile, the treatment in this experimental class employed the storytelling method with the help of media images attractive to children (Figure 2). Every three times, they were treated using the same media. However, the control class treated them as usual by coloring pictures about flooding (Figure 3).

Figure 1. Storytelling Activity in Experimental Class

Figure 2. Picture Media Used in Storytelling Activity in Experimental Class

Figure 3. Coloring Flood Event Picture Activity in Control Class

Researchers obtained pre-test and post-test data from experimental and control classes. To obtain data from those two classes, the researchers first tested the instrument, which would be used as a pre-test and post-test statement.

In the final stage, i.e., the post-test in the experimental and the control classes, activities regarding flood mitigation in early childhood were given according to the outline in the instrument statements. This stage was the same as the pre-test stage. However, in this post-test stage, after being given treatment, children were given the opportunity to retell what they already knew about flood disaster mitigation in early childhood. For more details, the researchers present the data and the pre-test and post-test results.

Table 1. Paired Sample Pre-test and Post-test Statistics of Control Class

		Mean	N	Std. Dev	Std. Error Mean
Pair 1	Pre-Test	36.40	20	5.305	1.186
	Post-Test	48.70	20	8.904	1.991

The change from the pre-test to post-test results in the control class can be seen from the paired value in the pre-test of 36.40. Then, the post-test increased to 48.70, meaning that the change after being given treatment increased by 12.30 in the control class

Table 2. Paired Sample T-Test Result of Control Class

	Paired Differences					
	Mean	Std. Dev	Std. Error Mean	t	df	Sig (2-tailed)
Pre-Test Post-Test	12.300	9.286	2.076	-5.924	19	0.000

Based on the table above, the Sig (2-tailed) value in the control class was 0.000, less than 0.05. Thus, H_0 was rejected, and H_1 was accepted. It denotes an average difference between the pre-test and post-test results, so it can be said that there was a significant influence on the activities of coloring stories about floods on flood mitigation knowledge in early childhood.

Table 3. Paired Sample Pre-test and Post-test Statistics of Experimental Class

		Mean	N	Std. Dev	Std. Error Mean
Pair 1	Pre-Test	33.20	20	7.445	1.665
	Post-Test	64.65	20	4.804	1.074

The change from the pre-test to post-test results in the experimental class can be seen from the value of Pair 1 in the pre-test of 33.20. The post-test increased to 64.65, indicating that the change after treatment increased by 31.45 in the experimental class.

Table 4. Paired Sample T-Test Result of Experimental Class

	Paired Differences					
	Mean	Std. Dev	Std. Error Mean	t	df	Sig (2-tailed)
Pre-Test Post-Test	31.450	7.930	1.773	-17.735	19	0.000

Based on the table above, in the experimental class, Sig (2-tailed) was 0.000, less than 0.05, so H_0 was rejected, and H_1 was

accepted. It demonstrates an average difference between the pretest and posttest results, so it can be said that there was a significant influence on the activity of the storytelling method on flood mitigation in early childhood.

Discussion

Based on the calculation results above, the storytelling method affected the understanding of flood mitigation in children aged 5-6 years in the Wanasalam Sub-district. This study found that the storytelling method using picture media to introduce an understanding of flood mitigation in early childhood was quite influential. It aligns with the results of research conducted by Putri (2019) that using the storytelling method using audio-visual media to increase early childhood understanding of natural disasters. This research showed that providing appropriate and fun methods for children, such as the storytelling method, could increase children's interest in learning because their interest in listening to learning about flood mitigation is needed, especially for areas prone to flood disasters (Artha et al., 2020; Try et al., 2022). The storytelling method can also train children to focus more on paying attention and is very interesting for children, so it is very suitable to be applied to convey to children regarding flood mitigation and potentially for another type of disaster mitigation (Rahiem & Widiastuti, 2021; Solfiah et al., 2021). When giving material using the storytelling method, children become more active, the material is accessible for children to understand, and children are very enthusiastic about listening (Utami et al., 2022).

CONCLUSION

This study examines the influence of the storytelling method on understanding flood mitigation in children aged 5-6 years at PAUD Nurul Huda Cipedang, Wanasalam Sub-district, Lebak-Banten. This study used two classes: experimental and control classes at Maulana Yusuf PAUD. The experimental class was given treatment using the storytelling method with the help of visual media. In contrast, in the control class, usual learning was used, which was often carried out, namely drawing.

It can be concluded that there was an influence of the storytelling method on the understanding of flood mitigation in early childhood. Thus, it was proven that H_0, stating that there was no significant effect of the storytelling method on understanding flood mitigation for early childhood, was rejected. Meanwhile, H_1, which stated that there was a significant effect on the better experimental class on the control class after using the storytelling method on the understanding of flood mitigation for early childhood, was accepted. Furthermore, the change after being given treatment from the control class was 12.30; from the experimental class, it was 31.45. Then, this research implies that there was an influence of the storytelling method on the understanding of flood mitigation in the Wanasalam Sub-district.

Based on the research results above, suggestions from researchers are that it can be a source of information and a reference for further research on flood mitigation using different methods so that flood mitigation in early childhood can be conveyed even more interestingly.

REFERENCES

Agrestin, I., & Maulidiyah, E. C. (2021). Pengembangan media big book terhadap pengetahuan bencana banjir pada anak usia 5-6 tahun. *Al Hikmah: Indonesian Journal of Early Childhood Islamic Education*, *5*(2), 90–111.

Artha, R. S., Suryana, D., & Mayar, F. (2020). E-Comic: Media for understanding flood disaster mitigation in early childhood education. *Jurnal Pendidikan Usia Dini*, *14*(2), 341–351.

Atmojo, M. E. (2020). Pendidikan dini mitigasi bencana. *Jurnal ABDIMAS BSI (Jurnal Pengabdian Kepada Masyarakat)*, *3*(2), 118–126.

Elia, E. (2019). Implementasi pengembangan perilaku anak usia dini melalui metode bercerita. *Mau`Izhah: Jurnal Kajian Keislaman*, *9*(1), 1–26.

Indarwarti, A. (2017). Mengembangkan kecerdasan kognitif anak melalui beberapa metode. *Jurnal Ilmiah Psikologi: Psycho Idea*, *15*(2), 109–118.

Kurnia, R. (2021). Analisis buku cerita bergambar "Banjir Di Desaku" media pengetahuan personal safety bencana banjir pada anak usia dini. *KINDERGARTEN: Journal of Islamic Early Childhood Education*, *4*(2), 291–302.

Lai, B. S., & La Greca, A. (2020). Understanding the impacts of natural disasters on children. *Society for Research in Child Development Child (SRCD): Child Evidence Briefs*, *8*, 1–2.

Lestari, D. S. (2017). Perancangan media edukasi tanggap menghadapi bencana banjir untuk anak-anak di Dayeuhkolot. *e-Proceeding of Art & Design*, *4*(3), 759–766.

Nasrullah, Y., Akbar, Z., & Supena, A. (2021). Pengembangan media komik untuk meningkatkan pemahaman kesiapsiagaan bencana banjir pada anak. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *6*(2), 832–843.

Ningtyas, D. P., & Risina, D. F. (2018). Peningkatan self awareness anak usia dini melalui media video mitigasi bencana gunung meletus. *Al-Athfal: Jurnal Pendidikan Anak*, *4*(2), 113–124.

Nurfadilah, N., & Darsono, D. R. (2021). Pendidikan kebencanaan pada lembaga PAUD rawan banjir di Jakarta Pusat. *Jurnal Al-Azhar Indonesia Seri Humaniora*, *6*(1), 66–71.

Nur, H., & Vicky, M. N. (2022). Edukasi mitigasi bencana pada anak usia dini. *INOVASI: Jurnal Pengabdian Masyarakat*, *2*(1), 1–6.

Proulx, K., & Aboud, F. (2019). Disaster risk reduction in early childhood education: Effects on preschool quality and child outcomes. *International Journal of Education Development*, *66*(C), 1–7.

Putri, A. A. A. D. (2019). Penerapan metode bercerita menggunakan media audio-visual untuk meningkatkan pemahaman anak usia dini mengenai bencana alam. *Jurnal Pendidikan Anak Usia Dini Undiksha*, *7*(3), 246–250.

Qurrotaini, L., Putri, A. A., Susanto, A., & Sholehuddin, S. (2022). Edukasi tanggap bencana melalui sosialisasi kebencanaan sebagai pengetahuan anak terhadap mitigasi bencana banjir. *AN-NAS: Jurnal Pengabdian Masyarakat*, *2*(1), 35–42.

Rahiem, M., & Widiastuti, F. (2021). Pembelajaran mitigasi bencana alam gempa bumi untuk anak usia dini melalui buku bacaan bergambar. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *5*(1), 36–50.

Rizqiyani, R., & Azizah, N. (2018). Kemampuan bercerita anak prasekolah (5-6 tahun). *Jurnal Pendidikan Anak*, *7*(2), 146–155.

Solfiah, Y., Risma, D., Hukmi, H., & Kurnia, R. (2021). Pengaruh buku cerita bergambar terhadap pengetahuan manajemen bencana anak. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *5*(1), 783–794.

Try, N., Fitria, Manalu, F., Rustini, T., & Wahyuningsih, Y. (2022). Pembelajaran mitigasi bencana banjir terhadap siswa sekolah dasar. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, *8*(1), 290–302.

Utami, F. B., Uswah, U., Kemal, F., & Nugraha, W. F. (2022). metode bercerita untuk pemulihan trauma anak pasca bencana gempa bumi Cianjur. *Jurnal Abdimas Bina Bangsa*, *3*(2), 403–409.