International Conference on Science, Education and Technology

66 Igniting Cutting-Edge Innovations in Science, Technology, Humanities for Sustainable Future



Gedung A Kampus Pascasarjana, Jl. Kelud Utara III, Semarang 50237 Telepon 024-86008700 Ext.900; Faksimile. 024-8449969 Laman: http://pps.unnes.ac.id, Surel: pascasarjana@mail.unnes.ac.id



at the **8 th International Conference on Science, Education and Technology (ISET 2022)** held by Postgraduate Program of Universitas Negeri Semarang (UNNES), Indonesia, on October 15, 2022

POSTGRADUATE PROGRAM UNIVERSITAS NEGERI SEMARANG



Certificate No. 11321/UN37.2/PP/2022

This is to certify

Agus Cahyono as a

Presenter

Semarang, October 15, 2022

HOIONAN REGER Director of Graduate Program

CASARJAN

Prof. Dr. Agus Nuryatin, M.Hum. NIP.196008031989011001

Kondobuleng Traditional Theater as a Media for Awareness of Waste Problems for a Sustainable Future

Prusdianto Prusdianto¹*, Muhamad Jazuli², Sofyan Salam¹, Agus Cahyono², Syakhruni

Syakhruni¹

¹Universitas Negeri Makassar, Makassar

²Universitas Negeri Semarang, Semarang *Corresponding Author: prusdianto@unm.ac.id

Abstract. Tanjung Bayang Beach has poor waste management with public awareness of the negative impact of garbage is still lacking. Public understanding of waste management is needed so that it can provide awareness to care more about waste. This study aims to overcome the problem of waste in Tanjung Bayang Beach through the innovation of the development of the Kondobuleng traditional theater. Community knowledge mediated by Kondobuleng theater as a way to achieve sustainable development targets. This research is a Research and Development (R&D). The model used is ADDIE; analysis, development, design, implementation and evaluation by specifically adapting the steps of the encounter between the source culture and the target culture from Patrice Pavis through mise en scene. The conclusion of this study is that a form of waste prevention in the Tanjung Bayang Beach area is to make the origin, consequences and handling of plastic waste in Tanjung Bayang as story ideas from theatrical performance products developed. The theater performances developed are effective and practical in overcoming the problem of plastic waste in the Tanjung Bayang Beach area.

Key words: Traditional Theater, Kondobuleng, Garbage, Tanjung Bayang Beach

How to Cite: Prusdianto, P., Jazuli, M., Salam, S., & Syakhruni, S. (2022). Kondobuleng Traditional Theater as a Media for Awareness of Waste Problems for a Sustainable Future. *ISET: International Conference on Science, Education and Technology* (2022), 816-822.

INTRODUCTION

Garbage has a harmful impact on health and the environment (Turner et al., 2021). Garbage is increasingly dangerous to life if it is managed improperly, such as incineration or by unregulated disposal (Sasman et al., 2021). Awareness of the impact of waste significantly affects its management behavior (Minelgaite & Liobikiene, 2019; Muharram, 2019).

Indonesia itself based on data from the Ministry of Environment and Forestry (KLHK) (Mahdi, 2022) it was recorded that the amount of waste owned reached 21.88 million tons in 2021 with the highest percentage of waste contributors, namely 42.23% coming from households, the remaining 15.26 % came from the market, 19.11% came from commerce, 6.72% came from offices, the contribution of public facilities and areas was 6.71% and 6.42%, respectively. Meanwhile, 3.55% of waste comes from other sources. The large amount of waste households produced by is inversely proportional to the awareness of family members in handling waste. For example, areas on Tanjung Bayang Beach, more and more waste generation on the coast due to the behavior of local people who do not understand waste management (Hohoba et al., 2019).

Coastal areas are important areas for biological productivity, geochemistry and human activities that have great financial significance (Economou et al., 2020). Coastal areas are also very important as a provider of food, recreation, and transportation which represent an important part of the world economy (Patuwo et al., 2020). Especially in the coastal and marine environment, 82% of marine waste is plastic waste (Jaskólski et al., 2018), in another study by Mary H. Wang et al (2019) it is even higher where plastic waste reaches 85% of waste contributors. seas around the world. Garbage in coastal areas has complex problems, including the accumulation of garbage that can reduce the beauty of coastal areas (Phelan et al., 2020), threats of natural hazards such as storm surges and floods when climate change has increased (Yoshioka et al., 2021), reduced fish productivity (van Truong & beiPing, 2019), affects plant metabolism and marine biota (Mulu et al., 2020), and even has an impact on human health (Tuholske et al., 2021).

Tanjung Bayang Beach is one of the coastal areas located in the village of Tanjung Merdeka, Tamalate District, Makassar, South Sulawesi. This location has a coastline of \pm 1500 m. Tanjung Bayang Beach has poor waste management (Ilham, 2019), where public awareness of the negative impacts of waste does not yet exist (Hohoba et al., 2019). The increasing number of residents in the Tanjung Bayang Beach Area is not balanced with environmental spatial planning (Reswita et al., 2021). This is what causes Tanjung Bayang Beach to have a high volume and quantity of waste (Isman, 2016).

Public awareness is the main driver in the success of sustainable waste management practices (Abbas et al., 2020). It is necessary to understand the community about waste management so that they are able to provide awareness to care more about the environment and health (Anggraini & Kamil, 2021). Based on these problems, an educational media that is easy to understand and easily accepted by coastal communities in Tanjung Bayang Beach is created through the innovation of developing the Kondobuleng traditional theater. Traditional high elements have effectiveness as communication media because they are rooted in the original culture which contains moral teachings and norms, all of which are felt as very important for people's lives (Arifuddin, 2017).

The purpose of this research is to overcome the problem of waste in Tanjung Bayang Beach through the innovation of the development of the Kondobuleng traditional theater. This traditional theater comes from Sulawesi, Sulawesi and contains educational values in it (Ramli, 2021). Public knowledge mediated by Kondobuleng theater as a way to achieve sustainable development targets, because the waste problem is a multi-sectoral issue that has an impact on various aspects of society and the economy (Environmental, 2017). The choice of Kondobuleng is not only because of the entertainment element, but also because of its cultural closeness so that it is easily accepted by the people of Tanjung Bayang Beach. The results of this development are devoted to the people of Tanjung Bayang Beach because in the show, in addition to using Makassar language speakers, also because the events are based on the Makassar coastal area and culture.

METHODS

This research is a type of research and development (R&D). The model used is ADDIE; analysis, development, design, implementation and evaluation (Hsieh, 2020; Ikeda et al., 2021; Lu, 2021; Ozdamli & Ozdal, 2018; Yu et al., 2021) by specifically adapting the steps of the

encounter between source cultures to target culture from Patrice Pavis (2003) through mise en scène in a chain of transmission by taking examples from the transmission of spoken texts to written texts, until they become performance texts.

The procedure carried out in the development as shown in Figure 1 can be described as follows:

The analysis stage is carried out with the aim of defining the problem, identifying the source of the problem and determining possible appropriate solutions. There is at the TO stage, namely the identification of ideas to identify oral stories with messages that lived in the past and developed in society, until the T1 stage of textual concretization, namely concretizing ideas through artistic form as a form of possible solutions. The output produced at this stage is a description of the need for elements of waste management which is used as an idea for the development of the Kondobuleng traditional theater.

The design stage is carried out by involving the use of the outputs from the analysis stage to plan strategies in the development of instructions or models. It is in the T2 stage of dramaturgical concretization, which is an adjustment effort between exploration and the creator's perspective. Selecting materials and creation techniques to concretize the elements of the show. The output produced is a product draft in the form of a play script from the development of the Kondobuleng traditional theater.

The development stage is carried out after both the analysis stage and the design stage are completed. At the T3 stage, the concretization stage is an attempt to bring the creator's perspective closer to the recipient through the performance elements. The output of this stage is the result of expert validation of the training process carried out by the expert review.

Implementation phase refers to the actual delivery of classroom, laboratory or studio-based instruction. At the T4 stage. receptive concretization the concretization is of acceptance, which is an attempt to bring the concretization of the creation of performance elements closer to the taste of the recipient. The output of this stage is a performance as a result of the development of the Kondobuleng traditional theater in overcoming the waste problem at Tanjung Bayang Beach which was piloted to the audience.

The evaluation stage aims to measure the

effectiveness and efficiency of the instructions. Evaluation must actually occur throughout the instructional design process including in stages, between stages and after implementation. At this stage, the final product of the development of the Kondobuleng folk theater is obtained as a medium for raising awareness of the waste problem for a sustainable future.



Figure 1. Development Design

Data collection techniques in this study using interviews, observation and documentation. The data analysis technique used includes product development process data, the initial stage is carried out by analyzing the potential and problems of handling waste in the Tanjung Bayang Beach area. The next stage is making a product design in the form of a story design for further validation and revision. The next stage is product development which is further validated by expert reviews. The last stage is a product trial to measure the efficiency and effectiveness of the product as a medium in overcoming the problem of plastic waste in the coastal area of Tanjung Bayang Beach.

RESULTS AND DISCUSSION

The first stage carried out in the development of traditional Kondobuleng theater as a medium for awareness of waste problems for a sustainable future is the analysis stage by defining the problem, identifying the source of the problem by concretizing ideas through artistic form as a form of possible solutions. The implementation was carried out in the form of interviews, documentation and direct observation to obtain data on waste and waste handling at Tanjung Bayang Beach as well as data on the Kondobuleng traditional theater.

Tanjung Bayang Beach is a tourist area that is crowded on weekends. The cleanliness of this beach is not maintained, along the beach is filled with garbage (Ilham, 2019). Garbage comes from several places, namely from nearby islands, namely Laelae Island, Samalona Island and Kodingareng Island. Most of the waste comes from the Je'ne Berang River. The origin of the garbage also comes from visitors and some from local residents at Tanjung Bayang Beach. However, they did not realize this. This is what causes the accumulation of garbage on the Tanjung Bayang coast, an awareness that is underestimated.

Some alternative knowledge that can be used in dealing with waste at Tanjung Bayang Beach (Mata, 2018), namely; 1) understanding of waste, this movement is carried out to provide an understanding of the negative impacts of marine debris, especially for health and ecosystems, as well as socialization related to integrated waste management, 2) waste control, waste control in watersheds, 3) waste management starting from reception Facilities up to transportation, supporting facilities and infrastructure in coastal areas, 4) strengthening institutions and increasing the effectiveness of supervision and implementation of law enforcement, especially in regulations for controlling waste on the coast, and 5) encouraging innovation in management and overcoming waste pollution in the sea through research. and development.

Information about the condition of garbage at Tanjung Bayang Beach and alternative forms of handling it are used as information for story ideas that are inserted in the Kondobuleng folk theater. The Kondobuleng theater itself tells the story of a hunter who chases a white stork in a coastal swamp area (Ramli, 2021). There are a number of fishermen in the swamp area who are catching fish. Finally, with difficulty, the hunter, assisted by fishermen, managed to shoot Kondobuleng. However, because of his magic, the stork was able to live again.

Next is the design stage, carried out in the form of writing a story design for the development of kondobuleng. The potential results and previous problems are used as the basis for making product designs. The result is that the main concept of the story is to continue to use the basic framework of the Kondobuleng folk theater story which is then inserted into an educational story about garbage. This story is the main information that will be conveyed along with the actions taken in dealing with waste in coastal areas. The story for the product design is made in 8 scenes, namely scene 1, a group of kondobuleng looking for fish on Tanjung Bayang Beach with exploration movements flying here and there as storks looking for food on the coast. Scene 2, discussion of fish seekers about fish, kondobuleng and plastic waste that they find so much on Tanjung Bayang Beach. Scene 3, Hunter shoots kondobuleng until it collapses, along with himself who also collapses and is lost in the waves. Scene 4, Pajala goes to report to Pak Lurah about the disappearance of kondobuleng, while also complaining about some of the impacts they have experienced due to plastic waste on the Tanjung Bayang beach. Scene 5, fish seekers consult, make boats using their bodies. Scene 6, the hunter is looking for kondobuleng. Scene 7, all looking for kondobuleng and found lying on the beach.

Scene 8, all praying to revive kondobuleng, live kondobuleng and fish seekers in the dialogue provide a way to overcome the problem of plastic waste in Tanjung Bayang Beach.

The development stage is carried out by validating the products that have been made by expert reviews, in this case Dr. Asia Ramli, M. Pd as an expert in Kondobuleng traditional theater. Validation is done in the form of studio research. The result of product development is that the story is based on the story of Kondobuleng, namely the story of the White Stork, fishermen and hunters by including messages about the effects of plastic waste on life and what is being done to overcome the problem of plastic waste in Tanjung Bayang. Presentation with dialogue, or dance and singing. The element of humor appears. Dramatic values and behavior are carried out spontaneously, the dialogues used are very simple, making it easier for players to develop them. The performance uses tetabuhan or traditional music, namely the typical music of South Sulawesi, namely the harp, flute and the Makassar drum. Using the dialect of the regional language, namely the Makassar regional language. The venue is open in the form of an arena (surrounded by an audience). The concept of this arena also makes it easier to deliver messages about the educational value of plastic waste problems in Tanjung Bayang. Products in the form of theater performances can be seen at following the link https://www.youtube.com/watch?v=Y-SPHZSO5Yo.

The Implementation phase is carried out online. Theatrical performances are made in the form of videos which are assessed along with a questionnaire in the form of a google form. The research subjects consisted of 20 people. Knowledge of waste problems was measured after watching a theater performance from the results of the development with a rating scale of 1 for not knowing, 2 for not knowing, 3 for knowing and 4 for being very knowledgeable. The results of product trials resulting from the development of the Kondobuleng theater as a solution to the problem of plastic waste in Tanjung Bayang are based on table 1.

Table 1. Houdet Hild Results					
No	Aspects assessed after watching Kondobueng theater	Re	sponse		
INO	performances	4	3	2	1
1.	The origin of the garbage in Tanjung Bayang			8 (40)	12 (60)
2.	Settlements in the Jeneberang river are a contributor to the			8 (40)	12 (60)
	garbage on Tanjung Bayang Beach				
3.	The lifestyle of residents on Tanjung Bayang Beach is a		1 (5)	3 (15)	16
	contributor to garbage on Tanjung Bayang Beach				(80)
4.	Tourist behavior is a contributor to garbage at Tanjung Bayang			4 (20)	16
	Beach				(80)
5.	Garbage is the cause of the decrease in fish at Tanjung Bayang			3 (15)	17 (85)
	Beach				
6.	Garbage can disturb marine life on Tanjung Bayang Beach			3 (15)	17 (85)
7.	Poor waste management makes the environment dirty			5 (25)	15 (75)
8.	The negative impact of garbage			7 (35)	13 (65)
9.	Garbage in watersheds can overcome garbage on Tanjung			5 (25)	15 (75)
	Bayang Beach				
10.	Waste management can solve the waste problem at Tanjung			4 (20)	16 (80)
	Bayang Beach				
11.	Institutional and improve the effectiveness of supervision and			5 (25)	15 (75)
	implementation of law enforcement, especially in waste control				
	regulations				
12.	Innovation management and overcoming waste pollution through			2 (10)	18 (90)
	research and development can overcome waste at Tanjung				
	Bayang Beach				

Table 1. Product Trial Results

The evaluation stage is carried out throughout the development process including activities in stages, between stages and after implementation until the final product of the development of the Kondobuleng folk theater as a medium for raising awareness of waste problems for a sustainable future.

CONCLUSION

The form of waste prevention in the Tanjung Bayang Beach area is to make the origin, consequences and handling of plastic waste in Tanjung Bayang as story ideas from theatrical performance products developed. The product of the development of the traditional Kondobuleng theater is theatrical performances as a medium for raising awareness of waste problems for a sustainable future, especially in the Tanjung Bayang Beach area. The theater performances developed are effective and practical in overcoming the problem of plastic waste in the Tanjung Bayang Beach area.

REFERENCES

Abbas, S. Y., Kirwan, K., & Lu, D. (2020). Measuring the Public Awareness toward Household Waste Management in Muharraq Governorate-Kingdom of Bahrain. *Journal* of Environmental Protection, 11(03). https://doi.org/10.4236/jep.2020.113012

- Anggraini, D., & Kamil, I. (2021). Community Empowerment Through Waste Management Into Economic Value In Babakan Ngantai Village Karang Tengah Sentul Bogor. *ICCD*, 3(1). https://doi.org/10.33068/iccd.vol3.iss1.362
- Arifuddin, A. (2017). Pemanfaatan Media Tradisional Sebagai Sarana Penyebaran Informasi Publik Bagi Kabupaten Masyarakat Serdang Bedagai (Studi Kasus pada Group Kesenian Pertunjukan Rakyat Cermin Theater di Kabupaten Serdang Bedagai). Jurnal **РІКОМ** (Penelitian Komunikasi Dan Pembangunan), 18(2), 91. https://doi.org/10.31346/jpikom.v18i2.874
- Economou, A., Kotsev, I., Peev, P., & Kathiojotes, N. (2020). Coastal and marine spatial planning in Europe. Case studies for Greece and Bulgaria. *Regional Studies in Marine Science*, 38. https://doi.org/10.1016/j.rsma.2020.101353

Environmental, P. U. N. (2017). United Nations Environment Assembly of the United Nations Environment Programme. United Nations.

Hohoba, B., Abbas, I., & Invanni, I. (2019). Pengelolaan Sampah Wisata Tanjung Bayang untuk Meningkatkan Daya Tarik Kunjungan Wisata Kelurahan Tanjung Mardeka Kecamatan Tamalate Kota Makassar. *Jurnal Environmental Science*, 2(1).

https://doi.org/10.35580/jes.v2i1.11424

- Hsieh, H. C. L. (2020). Integration of environmental sustainability issues into the "game design theory and practice" design course. *Sustainability (Switzerland)*, *12*(16), 1–19. https://doi.org/10.3390/SU12166334
- Ikeda, M., Nagata, T., Kimura, R., Yi, T. Y., Suzuki, S., Nagamatsu, S., Oda, T., Endo, S., Hatakeyama, M., Yoshikawa, S., Adachi, S., Miura, S., & Take, J. (2021).
 Development of disaster management education program to enhance disaster response capabilities of schoolchildren during heavy rainfall – implementation at elementary school in nagaoka city, niigata prefecture, a disaster-stricken area. *Journal* of Disaster Research, 16(7), 1121–1136. https://doi.org/10.20965/jdr.2021.p1121
- Ilham, M. D. M. (2019). Optimalisasi Pengelolaan Pantai Tanjung Bayang sebagai Daya Tarik Wisata Bahari Kota Makassar. *SEMINAR NASIONAL PARIWISATA "MARINE TOURISM,"* 186–195. http://repository.poltekparmakassar.ac.id/11 8/1/Prosiding Tanjung Bayang Dzakwan n Ilham.pdf
- Isman, F. M. (2016). *Identifikasi Sampah Laut Di Kawasan Wisata Pantai Kota Makassar* [Universitas Hasanuddin]. https://core.ac.uk/download/pdf/77629083.p df
- Jaskólski, M. W., Pawłowski, Ł., Strzelecki, M. C., Zagórski, P., & Lane, T. P. (2018). Trash on Arctic beach: Coastal pollution along Calypsostranda, Bellsund, Svalbard. *Polish Polar Research*, 39(2). https://doi.org/10.24425/118746
- Lu, Q. (2021). A New Project-Based Learning in English Writing. International Journal of Emerging Technologies in Learning, 16(5), 214–227.

https://doi.org/10.3991/ijet.v16i05.21271

Mahdi, M. I. (2022). *Mayoritas Sampah Indonesia Berasal dari Rumah Tangga*. Data Indonesia.

> https://www.google.com/search?q=Mayorit as+Sampah+Indonesia+Berasal+dari+Ruma h+Tangga&oq=Mayoritas+Sampah+Indone sia+Berasal+dari+Rumah+Tangga&aqs=chr ome..69i57j69i60.1234j0j7&sourceid=chro

me&ie=UTF-8

Mata, L. (2018). Waste management and disposal. In *Metiers de la Petite Enfance* (Vol. 24, Issue 254). https://doi.org/10.1016/j.melaen.2017.11.00

- Minelgaitė, A., & Liobikienė, G. (2019). Waste problem in European Union and its influence on waste management behaviours. *Science of the Total Environment*, 667. https://doi.org/10.1016/j.scitotenv.2019.02.3 13
- Muharram, S. A. N. S. (2019). Waste Management Problems in Banjarbaru City. *International Journal of Science and Research (IJSR)*, 8(3).
- Mulu, M., Wendelinus Dasor, Y., Hudin, R., & Tarsan, V. (2020). Marine Debris Dan Mikroplastik: Upaya Mencegah Bahaya Dan Dampaknya Di Tempode, Desa Salama, Kabupaten Manggarai, NTT. *Randang Tana - Jurnal Pengabdian Masyarakat*, 3(2). https://doi.org/10.36928/jrt.v3i2.404
- Ozdamli, F., & Ozdal, H. (2018). Developing an instructional design for the design of infographics and the evaluation of infographic usage in teaching based on teacher and student opinions. *Eurasia Journal of Mathematics, Science and Technology Education, 14*(4), 1197–1219. https://doi.org/10.29333/ejmste/81868
- Patuwo, N. C., Pelle, W. E. P. E., Manengkey, H. W. K., Schaduw, J. N. W., Manembu, I., & Ngangi, E. L. A. (2020). Karakteristik Sampah Laut di Pantai Tumpaan Desa Tateli Dua Kecamatan Mandolang Kabupaten Minahasa. *Jurnal pesisir dan laut tropis*, 8(1). https://doi.org/10.35800/jplt.8.1.2020.27493
- Pavis, P. (2003). *Theatre at the Crossroads of Culture*. Routledge. https://doi.org/10.4324/9780203359334
- Phelan, A. A., Ross, H., Setianto, N. A., Fielding, K., & Pradipta, L. (2020). Ocean plastic crisis—Mental models of plastic pollution from remote Indonesian coastal communities. *PLoS ONE*, 15(7 July). https://doi.org/10.1371/journal.pone.023614
- Ramli, A. (2021). Nilai-nilai Pendidikan dalam Pertunjukan Teater Rakyat Kondobuleng. *Publikasi Pendidikan*, *11*(2). https://doi.org/10.26858/publikan.v11i2.204 51

- Reswita, Mulyasari, G., & Reflis. (2021). Hubungan Degradasi Lingkungan Dengan Kemiskinan. *Jurnal Inovasi Penelitian*, 2.
- Sasman, M., Dolan, C. B., Villegas, D., Eyob, E., & Barrett, C. (2021). The Influence of Marginalization on Cultural Attitudes and Trash Disposal Practices in Esfuerzo de Paraíso of the Dominican Republic: A Qualitative Interview Study. *International Journal of Environmental Research and Public Health*, 18(6), 2872. https://doi.org/10.3390/ijerph18062872
- Tuholske, C., Halpern, B. S., Blasco, G., Villasenor, J. C., Frazier, M., & Caylor, K. (2021). Mapping global inputs and impacts from of human sewage in coastal ecosystems. *PLoS ONE*, *16*(11 November). https://doi.org/10.1371/journal.pone.025889 8
- Turner, C., Powell, M. A., Finalle, R. R., Westmoreland, K., Osterhoudt, K., Cordero Paulino, R., & Lowenthal, E. D. (2021). Talking trash: Perspectives on community environmental health in the Dominican Republic. *PLOS ONE*, 16(3), e0248843. https://doi.org/10.1371/journal.pone.024884

3

- van Truong, N., & beiPing, C. (2019). Plastic marine debris: sources, impacts and management. *International Journal of Environmental Studies*, 76(6). https://doi.org/10.1080/00207233.2019.166 2211
- Wang, M. H., He, Y., & Sen, B. (2019). Research and management of plastic pollution in coastal environments of China. In *Environmental Pollution* (Vol. 248). https://doi.org/10.1016/j.envpol.2019.02.09 8
- Yoshioka, N., Era, M., & Sasaki, D. (2021). Towards integration of climate disaster risk and waste management: A case study of urban and rural coastal communities in the Philippines. *Sustainability (Switzerland)*, *13*(4). https://doi.org/10.3390/su13041624
- Yu, S. J., Hsueh, Y. L., Sun, J. C. Y., & Liu, H. Z. (2021). Developing an intelligent virtual reality interactive system based on the ADDIE model for learning pour-over coffee brewing. *Computers and Education: Artificial Intelligence*, 2, 100030. https://doi.org/10.1016/j.caeai.2021.100030