

JPPIPA 9(Special Issue) (2023)

Jurnal Penelitian Pendidikan IPA

Journal of Research in Science Education



http://jppipa.unram.ac.id/index.php/jppipa/index

Mentawai Natural Environment Ornament Transformation on Batik Art Tatoo Motivation Based on Local Wisdom: Ecotourism

Agusti Efi1*, Budiwirman², Yusmerita¹, Sri Zulfia Novrita¹, Yulia Aryati¹, Gabila Heira Mutia³

¹Department of Family Welfare Sciences, Faculty of Tourism and Hospitality, Universitas Negeri Padang, Padang, Indonesia ²Fine Arts Department, Faculty of Language and Art, Universitas Negeri Padang, Padang, Indonesia

³Public health, Medical School, Universitas Andalas, Padang, Indonesia

Received: October 26, 2023 Revised: November 15, 2023 Accepted: December 25, 2023 Published: December 31, 2023

Corresponding Author: Agusti Efi Gustti@yahoo.co.id

DOI: 10.29303/jppipa.v9iSpecialIssue.5838

© 2023 The Authors. This open access article is distributed under a (CC-BY License)

Abstract: The people of the Siberut Mentawai islands still maintain various arts and practice the culture and customs of their ancestors. They have natural environment ornaments including tattoos and Jaraik, which is a symbol of the greatness of the Sikerei (Shaman) house in the Mentawai tribe. Along with the progress and development of the Mentawai area, traditional culture began to shift, therefore it is necessary to carry out conservation and development efforts. So, the purpose of this research is the efforts to preserve and produce creative art products based on local wisdom by transforming tattoos, jaraik, and other Mentawai natural environments in batik art and uniting various elements of visual cultural arts as supporting elements. The method used is research and development adopting the 4 D steps with four stages of development design, development, and deployment. In addition, the study also conducted studies of art and aesthetics, design and fashion as well as analysis of market tastes. So, the outputs of this research are; prototypes of batik art innovation products based on local Mentawai culture that are market-worthy; and scientific articles in reputable international journals. Focus Group Discussion (FGD) and product feasibility tests were carried out by experts and product exhibitions which were used as Mentawai branding.

Keywords: Environment; Local Wisdom; Transformation

Introduction

The Mentawai Islands is one of the regencies in West Sumatra Province which is located between 0°55'00" South Latitude and 3°21'00" South Latitude and between 98°35'00" and 100°32'00" Longitude East. Has boundaries north Siberut Strait, south Indian Ocean, west Indian Ocean, and east Mentawai Strait (Aprilyanto et al., 2021). The people still practice the culture and customs of their ancestors, one of which is tattoo art Tattoosnamely the art of painting on the body, tattoos are an identity that distinguishes one clan from another (Kıvanç Altunay et al., 2021). The function of tattoos as tribal identity has the most important position in identifying and communicating the boundaries of tribal areas (Kloß, 2022). The communication tool is in the form of visual language that is manifested through image elements, including images that are embedded in tattoos, which are present through symbols, identification marks, and decorations (Xin & You Ye, 2018).

Tattoos are not just body decorations but tattoos are sacred paintings in the life of the Mentawai people, especially the sikerei. Sikerei is a term for shaman, can tamer, or leader of uma traditional house. The Mentawai people also believe that tattoos are an emanation of the

How to Cite:

Efi, A., Budiwirman, Yusmerita, Novrita, S. Z., Aryati, Y., & Mutia, G. H. (2023). Mentawai Natural Environment Ornament Transformation on Batik Art Tatoo Motivation Based on Local Wisdom: Ecotourism. *Jurnal Penelitian Pendidikan IPA*, 9(SpecialIssue), 766–771. https://doi.org/10.29303/jppipa.v9iSpecialIssue.5838

spirit from their lives. Tattoos in Mentawai are referred to as titi or tiktik. Tattoos are not just body decorations but tattoos are sacred paintings in the life of the Mentawai people, especially the sikerei. However, the government's policy is that in the end the life of the sikerei only lives in the Siberut archipelago (Yulia et al., 2019).

Tattoo art is found on the bodies of men and women, which are symbols that contain local wisdom values human reasoning is always done through signs or symbols, which means humans can only reason through signs, reference signs (objects), and the use of signs (interpretant) or the so-called triangle theory of meaning, one of which is tattoo art (Amanda et al., 2019). Tattooing is the process of creating an image designed on the human body that cannot be changed by inserting a pigment into the skin (Phad et al., 2016). Creating a tattoo involves a painful sensation of multiple skin punctures performed with a needle (Tiggemann & Hopkins, 2011).

In addition to tattoos, the symbol of the greatness of the Sikerei house in the Mentawai tribe is Jaraik. Jaraik is one of the cultural heritages passed down from generation to generation by the Mintawai people. In addition to tattoos, the symbol of the greatness of the Sikerei house in the Mentawai tribe is called jaraik. Jaraik isinstalled in front of sikerei houses and the houses of people who are considered important in the Mentawai tribal community. This is in accordance with an interview with one of the Mentawai people, Ruth, who works at the District Tourism Office. Mentawai: "Jaraik is only owned by important people in customs and society which is a symbol of greatness and a symbol of harmony. Jaraik is placed in the Uma (traditional house) of the Mentawai tribe. What makes jaraik is sikerei. Jaraik is installed in front of the main door of Uma in January 2021.

Along with the progress and development of the Mentawai region, the traditional culture began to shift and began to be less attractive to the younger generation, while the sikerei in general were old. The Mentawai tattoo culture, known as the titi, is on the verge of extinction. Of the approximately 40 islands in the Mentawai Islands, West Sumatra, the titi culture is only left on Siberut Island. This has long been expressed by Rahung Nasution, in a review of the Mentawai Tattoo film at the Tourism College, Bandung. Rahung said that titi began to be threatened by the Soekarno government, precisely when a policy was issued through Decree No.167/Promotion/1954 which ordered the Mentawai tribe.

Efforts made by the community in preserving toto are through the younger generation, urging the younger generation to wear tattoos on their bodies, but they are not very effective. In addition, the community and several universities tried to transform tattoo motifs into textile art, especially batik art, but the results were also not encouraging because it was just a student practice trial (Popalyar et al., 2019). In addition, several craftsmen have done it, and have not shown encouraging results. These religious leaders were initiated into their ceremonial positions and were required to purchase and learn the requisite tattoo rituals itoperform them (Krutak, 2015).

This research intends to transform the Mentawai natural environment, tattoosjaraik and others in the art of batik, by uniting various forms of visual and cultural arts as supporting elements. In addition, the study also conducted studies of art and aesthetics, design and fashion as well as analysis of market tastes (Hegarty, 2017). The transformation of toto art and the natural environment of Mentawai in batik art is one of the conservation efforts, as well as building the creative economy and the Mentawai tourism economy (Sopanah et al., 2021). In By Number 24 of 2019 concerning the creativeeconomy, it aims to optimize the creativity of human resources based on cultural heritage, science, and technology.

This research is a development research. Previously, research related to the development of batik art has been carried out, among others: the development of motif design technology and batik production tools in 2017, the development of batik motif designs with IT based on local culture (West Sumatra) in 2018; Batik innovation with Minangkabau decorations in 2017-2018; Batik in casual clothing with the source of Mentawai tattoo ideas in 2020; Batik learning module; development of written Batik teaching materials in textile analysis course, department of Universitas Negeri Padang, Indonesia in 2019; coloring and peloro and techniques and waste control in Mimi Batik Business Solok City in 2019; and study on the use of dyes nature of Loempo Batik in Kenagarian Ampuan Lumpo, Jurai district, Pesisir Selatan regency in 2019. So, in this study, theMentawai natural environment transformation was carried out on batik motifs (2021) in secondary schools. Roadmap research.



Figure 1. Roadmap

Method

This activity uses the development method adopting 4-D steps. In this study, the Mentawai batik art development model was developed using a 4-D model. Thismodel consists of 4 stages of development, namely define, design, develop, and disseminate or be adapted into a 4-D model is defining, designing, developing, and distributing. In addition, the research also conducted studies of art and aesthetics, design and fashion as well as analysis of market tastes (Kim et al., 2020). In the define stage, there are main steps, namely front-end analysis, learner analysis, task analysis, concept analysis, and formulation of development goals. Then the define stage is carried out to determine the issue of preserving the Mentawai transitional culture and building a creative industry based on traditional culture; resource analysis, collecting cultural-based resources as a source of development and human resources that will support development; analysis of the concept of Mentawai batik development; formulating the goals of Mentawai Batik development. The initial design for development makes development plans, prepares infrastructure, technical steps for implementation, feasibility tests, and finishing.

The design stage aims to design learning devices (Susilawati et al., 2022). Four steps must be taken atthis stage preparation of batik standards to be developed, selection of media, tools, and textile materials to be used by product outputs, research objectives, selection of forms and product qualifications to be developed, batik and printed batik, make a design according to the batik produced or written batik and stamped batik (Naser et al., 2021).

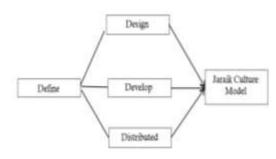


Figure 2. Research Procedure

The product development stage, starting from development testing is designing Metawai batik from local culture, tattoos and jaraik and other Mentawai natural environments in batik art, doing batik, coloring and pelorodan, conducting a feasibility test, with batik experts, Mentawai culture experts, and curators batik art, focus group discussion based on expert input, revisions were made, starting from the design, layout design according to form and function (Serup, 2017)). The dissemination stae, is the initial stage of introducing products to the Mentawai government through discussions and presentation, and participating in campus or local government exhibitions. In addition, introducing products in product exhibitions and the form of journals.

Result and Discussion

The Mentawai people still practice the culture and customs of their ancestors, one of which is Tattoos. The tattoo is the art of painting on the body, which is found onthe bodies of men and women. The variety of motifs painted on the body is not arbitrary. Tattoos are an identity that distinguishes one clan from another. Human reasoning is always done through signs, which means humans can only reason through signs, reference signs (objects), and the use of signs (interpretants) or the so-called triangle theory of meaning, one of which is tattoo art. The function of tattoos as tribal identity has the most important position.

In addition, the Mentawai people live in Uma and live in tribes. The Uma (traditional house) of the Mentawai community is not only a place to live but also a place for traditional ceremonies, family gatherings, celebrations, parties, and clanmeetings to be held in Uma. Inside the Uma is also placed a symbol of the presence of the spirits of their ancestors whom they respect. Uma has a central position in the social system of society as well as in the spiritual life of the Mentawai people including Jaraik which is placed at the door of 'Uma'.

An interview with one of the Mentawai people, Ruth, who works at the Tourism Office of Kab. Mentawai: Jaraik is only owned by important people in adat, which is a symbol of greatness and a symbol of harmony. Jaraik is placed in Uma (the traditional house of the Mentawai tribe), what makes jaraik is sikerei. Its use on uma with a ritual process that has mystical and magical elements. Jaraik is installed in front of the main door of the house. A house that has Jaraik or one that has Jaraik means that the occupant is an important person and an influential personand is respected for his high social status in society, whether as a sikerei or as a skilled hunter.

Developing Batik motifs based on Mentawai decorations cannot be separated from Mentawai culture. The concept of art, symbols, philosophies, and traditional values of the Mentawai people are maintained. This is in accordance with what (Dinata, 2018) stated, that batik design as part of traditional art is strongly influenced by art and customs that apply in its environment, religious factors and beliefs that are held also play a role in determining the shape and character of the resulting batik art (Villani et al., 2019).

Therefore, Batik innovations based on the Mentawai natural environment cannot be separated from the concept of culture, customs, and religion of the Mentawai people. The design of the motifs can be changed, according to consumer needs and the demands of the global market, but does not leave the distinctive Mentawai decorative style, so that the resulting batik deserves to be called Mentawai batik. In designing motifs sourced from the Mentawai natural environment, tattoos, and jaraik are the main aspects of batik. Therefore, the motifs that are used as sources of inspiration need to be stylized and adapted to the character of the batik motifs being developed (Mulyanto et al., 2022). In this study, the development test of Mentawai batik with Jaraik ornaments was carried out. The development steps are as follows: Analyze the shape of the motif ornaments that exist in jaraik, parse them one by one and analyze their shape and character.

The merging of motifs is done by looking at the same or almost the same shape, character, and philosophy (Aspers & Corte, 2019); To stylize the motifs, the motifs drawn are stretched and sorted out which have interrelated characters and philosophies (Nowell et al., 2017). The motifs are changed according to the arrangement of the batik motifs and the layout of the clothes. At this stage, a test of the motif and suitability of the motif on the clothes is carried out (Kusumowardhani et al., 2022); The shape and layout of the design that is considered appropriate is added with filler ornaments, such as the shape of the channel and small flowers or he filler motif found in toto or jaraik; Batik design trials are carriedout by combining various forms and compositions of the same or almost the same motif (Bowen et al., 2009). Similarity is seen in the character and philosophy of the motifs (Schroeder, 2019). Motifs are distilled and arranged into batik designs. The motif designs that have been made are reexamined for feasibility, balance, and aesthetics (Burnap et al., 2019). After reviewing the design that has been made, if an irregularity is found in he motif, it can be changed or added to the motif that is considered inadequate (Waschke et al., 2017).

The next step is to place the motif on the fabric and make batik by adjusting it to the clothing pattern or arranging the layout of the motif on the body (Ristya Rini, 2020). At this stage, a review is also carried out, whether the motif is considered balanced and in accordance with the expected composition. At this stage, if necessary, renovate themotifs that have been made, because they have not met the expected criteria. Designs that are considered good, are continued with the transfer of motifs to mori(the basic material to be made batik), and after that, batik is done. Experiments arecarried out repeatedly until a batik that is truly as expected is found. Examples of developing jaraik into batik motifs with the source of developing jaraik ornaments.



Figure 2. Jaraik Mentawai

In the next stage, the feasibility test of the batik motif design was carried out. If it is considered that the motive is not feasible and does not meet the expected criteria, improvements are made and even total changes are made if necessary. But if the design is deemed feasible, it goes through a feasibility test, followed by transferring the motif to the mori (the basic material to be made batik), and after that, batik is done. Experiments were carried out repeatedly until the desired batik was found.

The design test was carried out by design experts consisting of three lecturers and three lecturers of dress design, at Universitas Negeri Padang, Indonesia. Two entrepreneurial partners as product developers and batik business marketing and two batik consumers. The results of the feasibility test can be seen in the following table 1. Described from the results of the feasibility test of material experts in the tableabove is the feasibility of the source of the idea value of 87.14 in the very feasible category, the stylized value of 87.20% in the very feasible category, the very feasible category, aesthetics with a value of 87.3% and the content of the characteristics of Mentawai art 84.70%.

From the fiveaspects of the assessment above, an average of 87.1% was obtained with a very decent category. This validity proves that the design level of the Jaraik tattoo motifis very high. This shows that the

characteristics of Mentawai Jaraik can compete by traditional tattoo art competitions on par with other regional tattoo arts.

Table 1. The results of the feasibility test of material experts for the developmentof motif designs.

	Validity	
Assessment	Result	Category
Aspect	(%)	
Source of ideas	87.50	so worth it
Style	87.20	so worth it
Desain	89.10	so worth it
development		
Aesthetics	87.30	so worth it
Mentawai art	84.70	so worth it
character		

Conclusion

Development test of one of the Mentawai natural environments, namely Jaraik into a batik design, it was concluded that it could be developed into a Mentawai batik motif, through a feasibility test. The feasibility test phase, from theaspect of assessment source of ideas, stylization, design development, aesthetics, and characteristics of Mentawai art, obtained an average value of 87.1% which is declared very feasible and can be developed into Mentawai batik motifs. The Mentawai region's Jaraik culture can be used as a cultural characteristic that needs to be preserved for future generations. This culture requires the role of the government and the community to cultivate the Mentawai traditional ceremony as part of the Minangkabau culture. The government can revitalize the jaraik culture in he life of the Mentawai people. The government socializes to the public so that they continue to cultivate Jaraik in customs. The composition of the Jaraik culture can be developed by configuring other indigenous cultures to be competitive in the global arena. Tattoos can be used as a symbol of the cultural diversity of the Mentawai region which is a pillar of nationality. Therefore, the Mentawai people continue to preserve the Jaraik culture with distinctive tattoos.

Acknowledgments

I would like to express my deep gratitude to the individuals who contributed to the completion of this research project. I would also like to thank the participants in this study, who voluntarily shared their experiences and time, making this research possible. Also, I want to thank my family and friends for their unfailing support and encouragement. Their belief in me and constant motivation motivates me to face challenges.

Author Contributions

Conceptualization, A. E., B., Y., S. Z. N., Y. A., G. H. M; methodology, A. E.; validation, Y and.; formal analysis, S. Z. N.; investigation, Y. A., and.; resources, G. H. M and. A. F.; data curation, B.: writing – original draft preparation, Y and S. Z. N.; writing – review and editing, Y. A.: visualization, G. H. M and A. E. All authors have read and agreed to the published version of the manuscript.

Funding

This research was independently funded by researchers.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Amanda, R., Narti, S., & Risdiyanto, B. (2019). Analisis Makna Tato Sebagai Media Ekspresi Diri. Profesional: Jurnal Komunikasi Dan Administrasi Publik, 6(2), 68-77. https://doi.org/10.37676/professional.v6i2.946
- Aprilyanto, Ketut Kerta Widana, I. D., Subiyanto, A., & Surya Islami, H. (2021). Model system dynamics potential impact of disasters due to the re-period of the October 25 th, 2010 earthquake in the Mentawai Islands. *E3S Web of Conferences*, 331, 07004. https://doi.org/10.1051/e3sconf/202133107004
- Aspers, P., & Corte, U. (2019). What is Qualitative in Qualitative Research. *Qualitative Sociology*, 42(2), 139–160. https://doi.org/10.1007/s11133-019-9413-7
- Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., Bakken, S., Kaplan, C. P., Squiers, L., Fabrizio, C., & Fernandez, M. (2009). How We Design Feasibility Studies. *American Journal of Preventive Medicine*, 36(5), 452–457. https://doi.org/10.1016/j.amepre.2009.02.002
- Burnap, A., Hauser, J. R., & Timoshenko, A. (2019). Design and Evaluation of Product Aesthetics: A Human-Machine Hybrid Approach. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3421771
- Dinata, R. (2018). Philosophy and contemporary exploration on designing batik motif for JAVAJAZZ promotion poster application. *IOP Conference Series: Materials Science and Engineering*, 453, 012039. https://doi.org/10.1088/1757-899X/453/1/012039
- Hegarty, B. (2017). 'No Nation of Experts': *Kustom* Tattooing and the Middle-Class Body in Post-Authoritarian Indonesia. *The Asia Pacific Journal of Anthropology*, 18(2), 135–148. https://doi.org/10.1080/14442213.2016.1269833
- Kim, M., Park, S., Lee, H. U., & Kang, H. W. (2020). Quantitative Monitoring of Tattoo Contrast

Variations after 755-nm Laser Treatments in In Vivo Tattoo Models. *Sensors*, 20(1), 285. https://doi.org/10.3390/s20010285

- Kıvanç Altunay, İ., Mercan, S., & Özkur, E. (2021). Tattoos in Psychodermatology. *Psych*, *3*(3), 269–278. https://doi.org/10.3390/psych3030021
- Kloß, S. T. (2022). Embodying dependency: Caribbean *godna* (tattoos) as female subordination and resistance. *The Journal of Latin American and Caribbean Anthropology*, 27(4), 601–612. https://doi.org/10.1111/jlca.12644
- Krutak, L. (2015). The Cultural Heritage of Tattooing: A Brief History. In *Current Problems in Dermatology*, 48, 1–5). https://doi.org/10.1159/000369174
- Kusumowardhani, P., Indrianti, P., & Rachmawaty, R. (2022). Improving Batik Depok Motif Design By Implementing Color Trend Forecast In Ajbura Trajumas Indonesia. Proceedings of the First Jakarta International Conference on Multidisciplinary Studies Towards Creative Industries, JICOMS 2022, 16 November 2022, Jakarta, Indonesia, 1-11. https://doi.org/10.4108/eai.16-11-2022.2326054
- Mulyanto, M., Hartono, L., Murni, E. S., Handayani, E. S., & Nurcahyanti, D. (2022). Teak Trees as Source of Inspiration for Developing Batik Motifs. *Harmonia: Journal of Arts Research and Education*, 22(2), 241–253.

https://doi.org/10.15294/harmonia.v22i2.37874

- Naser, F. L., Khairi, H., Legino, R., & Rosman, R. (2021). Cultural Consciousness: A case study of dying art on Batik Block in Malaysia. *Environment-Behaviour Proceedings Journal*, 6(SI5), 111–117. https://doi.org/10.21834/ebpj.v6iSI5.2935
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 160940691773384. https://doi.org/10.1177/1609406917733847
- Phad, L. G., Tumram, N. K., & Dhawane, S. G. (2016). An unusual pattern of tattooing in the form of body designing: A case report. *Egyptian Journal of Forensic Sciences*, 6(4), 481–483. https://doi.org/10.1016/j.ejfs.2015.11.004
- Popalyar, A., Stafford, J., Ogunremi, T., & Dunn, K. (2019). Infection prevention in personal services settings: Evidence, gaps and the way forward. *Canada Communicable Disease Report*, 45(1), 1–11. https://doi.org/10.14745/ccdr.v45i01a01
- Ristya Rini, D. (2020). Designing Batik Motif with Digital Pattern Method. *KnE Social Sciences*. https://doi.org/10.18502/kss.v4i12.7587
- Schroeder, M. J. (2019). Analogy in Terms of Identity, Equivalence, Similarity, and Their Cryptomorphs.

32.

Philosophies, 4(2), https://doi.org/10.3390/philosophies4020032

- Serup, J. (2017). Individual Risk and Prevention of Complications: Doctors' Advice to Persons Wishing a New Tattoo. In *Current Problems in Dermatology*, 52, 18–29. https://doi.org/10.1159/000450775
- Sopanah, A., Bahri, S., & Ghozali, M. (2021). Community Empowerment in Batu Tourism City Through Local Wisdom- Based Creative Economics. Proceedings of the 1st International Conference on Social Science, Humanities, Education and Society Development, ICONS 2020, 30 November, Tegal, Indonesia 259. https://doi.org/10.4108/eai.30-11-2020.2303720
- Susilawati, S., Kusumayati, B. A., Sutrio, S., & Doyan, A. (2022). Practicality of Learning Devices Based on Conceptual Change Model to Improve Concept Mastery of Students in the Gas Kinetic Theory Material. AMPLITUDO: Journal of Science and Technology Inovation, 1(2), 54–57. https://doi.org/10.56566/amplitudo.v1i2.13
- Tiggemann, M., & Hopkins, L. A. (2011). Tattoos and piercings: Bodily expressions of uniqueness? *Body Image*, 8(3), 245–250. https://doi.org/10.1016/j.bodyim.2011.03.007
- Villani, D., Sorgente, A., Iannello, P., & Antonietti, A. (2019). The Role of Spirituality and Religiosity in Subjective Well-Being of Individuals With Different Religious Status. *Frontiers in Psychology*, 10, 1525. https://doi.org/10.3389/fpsyg.2019.01525
- Waschke, L., Wöstmann, M., & Obleser, J. (2017). States and traits of neural irregularity in the age-varying human brain. *Scientific Reports*, 7(1), 17381. https://doi.org/10.1038/s41598-017-17766-4
- Xin, T., & You Ye, H. (2018). The Application of Visual Illusion in the Visual Communication Design. *IOP Conference Series: Materials Science and Engineering*, 317, 012050. https://doi.org/10.1088/1757-899X/317/1/012050
- Yulia, R., Zulfa, ., Kaksim, ., & Naldi, H. (2019). Desa Sioban Tato Tradition Policy in Preservation in Mentawai: Proceedings of the International Conference on Education, Language and Society, 402–407. https://doi.org/10.5220/0008999604020407