

Environmental Literacy Education through Mural Artwork at Madrasah Diniyah Awaliyyah Al Qamariyyah in Ciroyom Bandung

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Abstract

This research aims to develop a mural artwork that conveys educational material on environmental literacy. Environmental literacy education is one of the most important things that children must learn. Such education may be done through formal or informal educational institutions. This research is conducted in Madrasah Diniyah Awaliyyah (MDA) Al Qamariyyah, located in Ciroyom settlement, Bandung. The existence of Madrasah Diniyah Awaliyyah Al Qamariyyah has been important for the people of Ciroyom urban village, Bandung. In this madrasah, the students can learn the basic values of Islam religion. Since its establishment, Madrasah Diniyah Awaliyyah (MDA) Al Qamariyyah have not been supported by a good environment condition for an educational institution. Therefore, some actions are necessary to help improve the environmental quality of the madrasah. The action that has been done is to create a mural artwork within the area of the madrasah. The mural artwork itself conveys educational values about environment. The method used in this research is the artistic research methods as brought forward by Borgdorff. This research conveys messages that includes aesthetic experiences, creative practices, and materializes an artistic product. This research explains the process of creating the artwork from preparation, elaboration, synthesizing, concept realization, and finishing of the artwork. The process resulted in a mural artwork that presents the important values of appreciating the environment.

Keywords: creation, mural, environmental literacy, madrasah, Ciroyom settlement

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1. Introduction

Currently, environmental issues are in the spotlight around the world. The decline of environmental quality is caused by people's behavior that does not reflect awareness on the importance of a good living environment. In small scale, such as house and its surroundings, behaviors that contributes to damaging environment are still being practiced. As an example, littering, poor trash and household waste management, and the reluctance to reduce plastic waste. One of the ways to increase awareness on importance of a good living environment is by giving education to the community with the intention to improve environmental literacy. According to Hollweg et. al. (2011), environmental literacy is described as knowledge about the environment along with one's attitude that is willing to make effective decisions in various context of environment. According to McBeth as quoted in Kusumaningrum (2018), one's environmental literacy can be measured through four components: basic knowledge about environment; behaviors that involve views, awareness, and feelings towards the environment; cognitive abilities that involve identifying environmental problems, environmental analysis, and implementation of planning; and behaviors that involve real actions on the environment. This educational process may be conducted in formal or informal educational institutions with students of various age groups. Educational medias that facilitate students to learn and understand the material is necessary to support those educational process. An example of educational media that may be used is mural artworks that is presented in the vicinity of the educational institution. Lakoro (2019) conveyed that mural artworks can create space to produce educational messages.

This research is an artistic research conducted in an informal Islamic educational institution with students ranging from 5 to 10 years of age. There are also other researches related to this one that is relevant to be submitted as a comparison. The research about environmental literation in educational institution by Goulgouti (2019) emphasizes the role of teachers in conjunction with environmental literacy education in public schools. Meanwhile, Kusumaningrum's research (2018) concluded that environmental literacy content should be integrated within the curriculum to be effectively taught and understood by students. Other research by Meiboudi (2011) explained themes of mural paintings in kindergartens as an educational media to learn about the environment. The themes of mural paintings are being dominated by themes about friendship with nature, whereas themes about environmental problems are rarely used. From those researches, it is pictured that environmental literacy is something very important to be conveyed to students, actively involving teachers and curriculum that is integrated with other learning materials.

As an artistic research, this research aims to develop a mural artwork that conveys educational materials on environmental literacy. This mural artwork is located at Madrasah Diniyah Awaliyyah (MDA) Al Qamariyyah, located in the urban village of Ciroyom, Bandung, Indonesia. The method used to create the artwork is the method presented by the Art Consortium. This method divides the creation process into preparation, elaboration, synthesizing, concept realization, and finishing or evaluation. The manager of the madrasah is also involved within the preparation process in the forms of discussion and artwork idea development. By conducting this research, MDA Al Qamariyyah can complement the learning media necessary for teaching and learning process while also increasing the aesthetic values of the madrasah's surroundings.

2. Mural as a Media to Develop Environmental Literacy in Madrasah

In Indonesia, a madrasah is an Islamic educational institution. Law that regulates madrasah is the Regulation of the Ministry of Religion of Indonesia Number 13 of 2014 concerning Islamic Religious Education. Within this law, a Madrasah Diniyah Takmiliah Awaliyah is considered an informal *diniyah* educational institution. Students, which also called *santri*, are aged between 7 to 12 years old. Sometimes in madrasahs, a Taman Pendidikan Al Quran is also established with *santri* aged between 5 to 7 years old. Generally, the purpose of administration of Islamic religious education is to instill faith and devotion to Allah SWT., develop the student's abilities, knowledge, behavior, and skills to become an Islamic scholar (*Mutafaqqih fiddin*) and/or to become a Muslim that can practice the teachings of Islam in their everyday life. Islamic religious education also aims to develop students with an *akhlaqul karimah* personality that have individual and social piety while upholding sincerity, modesty, independence, brotherhood among fellow Muslims, humility, tolerability, balanced life, feel of plenty, exemplary, healthy lifestyle, and love for the homeland. To achieve those purposes, students in a Madrasah Diniyah Takmiliah Awaliyah are at least taught about the Al Quran, Al Hadith, *Fiqh*, *Akhlaq*, Islamic culture and history, and Arabic language.

The learning materials at a madrasah generally have contents that fit with the development of environmental literacy, such as embedding the values about loving personal and environmental hygiene. The *santris* are taught about the etiquettes of wudhu (ablution before praying) and how to maintain environmental hygiene. This is in accordance with the teachings within Islam as conveyed within the Hadith of the prophet: "From Rasulullah PBUH: Allah is good, loves what is good; He is clean, loves cleanliness; He is generous, loves generosity. Therefore, you should keep yourselves clean, too." (At Tirmidhi). Creating a healthy and clean environment is an action that provide an understanding of environmental literacy.

Montessori considers that the environment plays an important role in children's learning process. An ideal environment should be able to delight children such that their individual potential has a chance to grow and develop (Hidayatulloh, 2014). An educational institution, including a madrasah, have the responsibility to present environments that gives out positive impacts to the development of affective, cognitive, and psychomotor aspects of the students. One strategy to present additional values to the environment is by creating a mural. Badoe (2015) quoted, a mural is an extremely large work of art, most often a painting applied to the surface of a wall, ceiling, or floor for aesthetic and didactic purposes (WisegEEK, 2012) and mural can be referred as fresco and it could be applied to or made integral part of the surface of a wall, ceiling, or floor (Adams, 1999). Murals can be made as sculptures, paintings, ceramics, mosaic, digitally printed and in many other forms. The artwork displayed in this mural is basically an illustration art. Illustration is a type of artwork created to convey messages, information, or a narration to the audience while also presenting some form of aesthetic value. Some illustration artwork clearly depicts real life experiences. This is accordance with Sihombing (2014), that Illustrations are pieces of visual information which enable readers to be involved in a plot and bring them to the real experiences. This mural art will display fragments inspired by daily life experiences.

As an educational institution, MDA Al Qamariyyah takes part in instilling awareness of environmental literacy since a young age. To achieve that, some early action that can be done is by improving the condition around the madrasah by creating an environment-themed mural artwork. These artworks are expected to help the madrasah foster the atmosphere needed to help children learn basic things about how to appreciate the environment.



Figure 1. Students (*santri*) studying at MDA Al Qamariyyah

3. Research Methods

The process of mural artwork creation in MDA Al Qamariyyah is basically an artistic research. According to Borgdorff as quoted by Guntur (2016), an artistic research aims to convey and communicate contents that enclose aesthetic experiences, play creative practices, and create an artistic product. The process to create this artwork follows the steps brought forward by the Art Consortium, the 5 (five) steps of creation, which are: (1) preparation, (2) elaboration, (3) synthesizing, (4) concept realization, and (5) finishing or evaluation (Bandem in Adams, 2014). Preparation involves observation, collecting information, and ideas. Elaboration involves finalization of ideas through analytics, integration, abstraction, generalization, and transmutation. Next, synthesizing is the step to manifest the artwork conception. Realization involves inclusion of the artwork concept into various art medias. Finishing is the final form of the artwork.

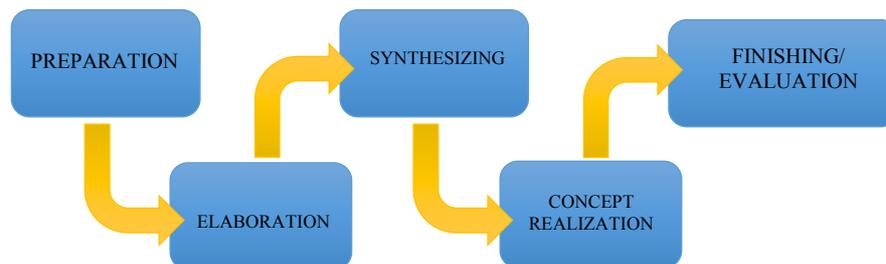


Figure 2. Methods Used to Create the Artwork

4. Results and Discussion

The creation of the mural artwork in MDA Al Qamariyyah takes aesthetic and functional aspect into account. The finished artwork functions as a media to convey messages about the importance of keeping the environment. By following Campbell's creation methods, the process to create this artwork begins with a preparations step. In this step, direct observation is being done to the madrasah site and discussions started with the manager of the madrasah. The goal is to obtain ideas directly from the site's both tangible and intangible conditions. To reach the location of the madrasah, one must go through an alleyway about one meter wide. The madrasah is located in the middle of the Ciroyom densely populated settlements, not far from the Ciroyom Bermartabat tradition market. At the mouth of the alleyway, there is a 3x3 meters open area. This area is used multifunction, both as an access to the settlements and as an open area for playground or trading.



Figure 3. (a) Open area before the alleyway used as the *santri*'s playground.
(b) Alleyway access to MDA Al Qamariyyah

MDA Al Qamariyyah is located within a house of a local resident. The house itself is coinciding with another house due to the densely populated area. The learning process is conducted within the two rooms inside the house which is being converted into a 3 x 5 meters classroom. The house also has a porch about 1.7 x 6 meters. Right in front of the house there is wall of another house with a pre-existing mural artwork that is already deteriorating. After being discussed with the manager, a new mural artwork will be created on that wall, replacing the pre-existing one. Other activity that is being done at this step is to interview the managers of MDA Al Qamariyyah. From the interviews, it is revealed that the people's awareness for the environment around the madrasah's vicinity is poor. They do not understand waste sorting and trash management, and still dump their waste to a nearby river. Therefore, it is agreed that one of the themes displayed on the new mural will be about environmental literacy. This theme is also aimed at the parents of the students because the wall used for the artwork is within sight of the parents' waiting area.



Figure 4. (a) The wall used for the artwork.
(b) View of MDA Al Qamariyyah's porch.

Second step is the elaboration step. From the results of observation and interviews, main ideas are brought up as references for the artwork. The main theme for this artwork is to show a learning atmosphere full of environmental literacy concept. Within this artwork, the following objects are shown: (1) The figure of *santri*. The artwork carries the theme of children as *santris* that have a passion for learning. The identity as a *santri* is visually shown through the depiction of uniforms used by the *santris* of MDA Al Qamariyyah. Other than the figure of *santris*, the figure of women teachers (*ustadzah*) is also shown along with their Islamic identity through their clothing. Other figures include animals which the kids are familiar with. (2) An imaginative background. Background is an important piece in supporting a theme because it strengthens the message conveyed. The background used shows an outdoor environment with river, settlements, a masjid, and the madrasah. This background concept is aimed to give imaginative experiences for the children. (3) Fantasy objects. These objects are shown to add an imaginative atmosphere. The objects are a depiction of items used to study associated as a living creature.

Within synthesizing as the third step, the artwork conceptions are being realized into visual planning. A cartoon visual style is chosen to emulate happiness and cuteness. Cartoon visual styles are also more favored among children. A cartoon style is an illustration style with exaggerations or simplifications of visual objects with the intention of emulating cuteness or humor. This artwork illustrates a group of *santri* doing various

learning activities and playing. Those depiction of activities are divided into several fragments and each have its own story. There is a fragment about learning to sort waste, taking a wudhu (ablution), playing with a paper boat, playing on the tree, and going to class. Although each fragment has its own story and background, they are placed within the same landscape. The landscape is visualized to resemble a shape of an opened book. The thickness section of the book is made into a river and the sheets of paper are depicted as water waves. By depicting a book as a symbol of education, this artwork also conveys a message that education will give opportunity for children to learn new things.

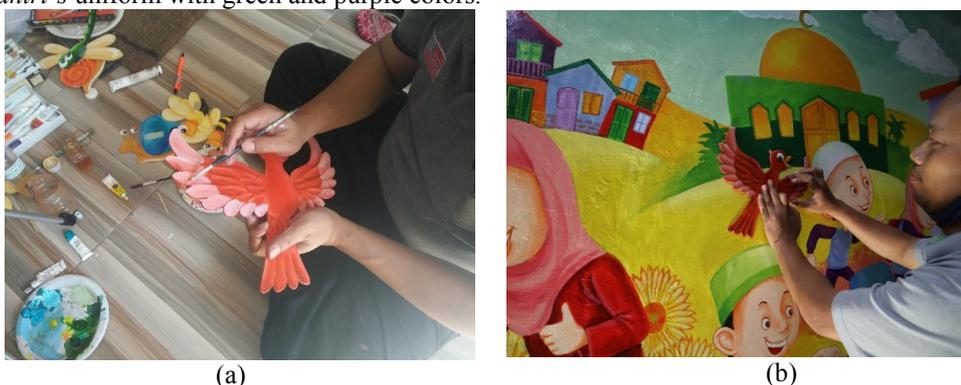
The fourth phase, which is concept realization, starts with the drawing of sketches on a worksheet. In the process of creating this sketch, visual principles, such as composition and visual balance, are taken into considerations by placing the fragments or scenes on to the workspace. Objects visualizations are processed with the cartoon visual style so that the objects go through anatomic simplification and shape distortion. The human and animal figures are depicted with a happy expression and body language.

In the finishing as the last phase, observation on the wall as the art medium is made. The dimensions for the wall that is being prepared and used for the artwork is 2 x 4 meters. The surface conditions of the wall are flat enough to ease the work on each stage of the visualization. The visualization process is done in steps. The first step is to cover the whole medium with white paint to ease the process of creating the sketch and coloring in the next step. The sketching process is basically transferring the previous sketch made on a worksheet to the sketch on the wall. The result of the sketching process is the rough image of each objects with clear and thick lines to ease the process of coloring.



(a) (b)
Figure 5. (a) Sketching the mural
(b) Coloring the mural

The coloring step is done in phases both for object and background color. The paint used is a high-quality acrylic paint. Coloring starts by brushing color evenly on the object fields according to previous planning and sketching. Shading is also done to give a feel of depth. The coloring step is quite intense, especially during shading. Color gradation is shown smoothly. Color selection for this artwork is dominated by contrast color selection such as yellow-blue-red-purple-green. For the landscape, yellow and turquoise blue is used. The figures shown uses appropriate colors according to their respective objects, while the identity of the institution is shown on the *santri's* uniform with green and purple colors.



(a) (b)
Figure 6. (a) Creating the visual element for the mural
(b) Placing the visual element on the mural

The next step is to add visual elements in the shapes of various animals and imaginative objects that is usually found in the environment. The animals and other imaginative objects take form in the shape of a dragonfly, a bird, and a snail. These visual elements are glued on to the wall while extruded about 3mm from the wall to give the feel of the object protruding from the wall. The purpose of adding this visual element is to give accents to the mural artwork and not just leave it flat. The material used is foam boards with 3mm thickness. The

objects are then painted using oil paint because it adheres well to the foamboard. The final step for the realization of this artwork is by applying protective coating on the surface of the artwork.



Figure 7. Final result of the mural artwork

These are the artwork's analysis by observing the environmental literacy education content on each of the presented fragments:

Table 1. The Contents of Each Fragment

Picture of Fragments	Description	Content
	<p>In this fragment, a <i>santri</i> is shown disposing trash while sorting it between organic and non-organic. That <i>santri</i> is accompanied by a teacher. Both figure's expression looked happy. So does the trash can which is depicted as a laughing living creature.</p>	<p>The problem of trash in Indonesia is rather difficult to solve because the lack of awareness in sorting trash at the household level. One solution to this is to give knowledge about trash sorting since a young age to let children grow to a responsible individual that understands the trash problem.</p>
	<p>In this fragment, a <i>santri</i> is shown washing his hands using the water tap. That <i>santri</i> is taking a <i>wudhu</i> (cleaning oneself before praying). The water is shown overflowing to the river. Another <i>santri</i> is shown waiting for his turn.</p>	<p>Rivers are an important part in human lives. The overflow of water from the tap to the river reminds that eventually all water will flow to the river. Children may learn this the simple way. Water that is being used in their homes will eventually flow to the nearby river.</p>
	<p>In this fragment, a <i>santri</i> is shown playing with a paper boat on the side of the river. Near the child, a fish is shown jumping out of the river. The position of the river is shown to be near the house.</p>	<p>Currently, most rivers near cities are neglected. They are turned into waste dumps. This illustration conveys a message that rivers must be maintained for it to become a good habitat for all living creatures around it. From this illustration, children may learn that a good river can be a good friend as well.</p>
	<p>In this fragment, two <i>santris</i> are shown near a tree. One <i>santri</i> is reading a book while the other is playing on the swing.</p>	<p>A tree is always used as a symbol for a healthy environment. Contradictory to what is happening now, a lot of trees are cut for various reasons. Children are invited to learn about trees that will give them many benefits and happiness.</p>
	<p>In this fragment, two <i>santris</i> are shown approaching a teacher. One <i>santri</i> is greeting the teacher, while the other is waiting behind her. This fragment is illustrated to take place on a porch of a house/madrasah that have a vertical garden built to its side.</p>	<p>One way to improve the environment quality is by planting using a vertical garden on the yards or walls of house. The illustration helps children understand about how to manage the environment around their house by planting live plants.</p>
	<p>All fragments are placed on an open landscape with a river, land, and a horizon. The illustration of the landscape is made resembling an opened book and the thickness part is resembled to be a river.</p>	<p>Metaphorically, books are the symbol of knowledge. Books are often related to educational institutions. This illustration conveys a message that children can learn various useful knowledge through books. In the context of this artwork, its religious and environmental knowledge.</p>

From the above explanations, the messages conveyed through the mural artwork in MDA Al Qamariyyah is filled with environmental literacy contents. It is expected that through continuing education process and started from a young age, the next generations can have a good environmental literacy. MDA Al Qamariyyah is located in a densely populated settlement and have problems that can be used as a drive to change towards a better direction. One's environmental literacy, according to McBeth (2010), is reflected through four aspects, which are: basic knowledge about environment; behaviors towards the environment; cognitive abilities about environmental problems; and behaviors that involve real actions on the environment.

5. Conclusion

Environmental literacy can be instilled since a young age through education so that children may grow to a generation that care for the environment. The efforts to promote environmental literacy within an educational institution can be done by presenting mural artworks. An important step in creating the mural artwork such that it can be accepted within an educational environment is to build an understanding of that educational environment. Therefore, the final result can have educational and aesthetic values while maintaining a strong relatable feel with the people.

References

- Adam, S. (2018). Seni Lukis sebagai Refleksi Ketidakberdayaan dan Keterpinggiran Cokok, *Mudra Jurnal Seni Budaya*, **33**, 1 – 8.
- Badoe, W., Mensah, B., Koku, V. B. (2015). Design and Production of Textile Mural: Combination of Computer Aided Programmes and Conventional Methods, An Alternative Innovative Approach. *Arts and Design Studies*, **38**, 1-14.
- Goulgouti, A., Plakitsi, A. Stylos, G. (2019) Environmental Literacy: Evaluating Knowledge, Affect, and Behavior of Pre-service Teachers in Greece. *Interdisciplinary Journal of Environmental and Science Education*, **15**, 1-9.
- Guntur. (2016). Metode Penelitian Artistik. ISI Press, Surakarta.
- Hidayatulloh, M.A. (2014). Lingkungan Menyenangkan dalam Pendidikan Anak Usia Dini: Pemikiran Montessori, *Nadwa Jurnal Pendidikan Islam*, **8**, 139-154
- Kusumaningrum, D. (2018). Literasi Lingkungan Dalam Kurikulum 2013 dan Pembelajaran IPA di SD Indonesia. *Journal of Natural Science Education (IJNSE)*, **01**, 57-64.
- Hollweg, K. S., Taylor, J. R., Bybee, R. W., Marcinkowski, T. J., McBeth, W. C., & Zoido, P. (2011). Developing a framework for assessing environmental literacy. Washington, DC: North American Association for Environmental Education. Available at <http://www.naaee.net>.
- Lakoro, R., Sachari, A., Budiwaspada, A. E., Sabana, S. (2020). Participatory Art as Disaster Education in Bojongsoang District of Bandung Regency, *Arts and Design Studies*, **87**, 40-44.
- McBeth, W., Volk, T. (2010). The National Environmental Literacy Project: A Baseline Study of Middle Grade Students in the United States. *Journal Of Environmental Education*, **41**, 55-67.
- Meiboudi, H., Karimzadegan, H., Khalilnejad, S.M.R. (2011). Enhancing Children's Environmental Awareness in Kindergarten of Mashhad City Using Mural Painting, *Procedia - Social and Behavioral Sciences*, **28**, 1020 – 1028
- Sihombing, R.M., Sabana, S., Syarief, A. (2014). The Representation of Mother and Child Figures in Indonesian Children Books Illustration. *Arts and Design Studies*, **24**, 26-33.