

Art Education for Sustainable Development

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Abstract. Through the process of visual analysis of an artwork called '*Hidden*', this research article explores the relevance of art and design projects for the development of AESD - Art Education for Sustainable Development. '*Hidden*' is the name of one of the paintings produced in an art project by the Faculty of Communication, Arts and Media at the International University of Malaya-Wales, Malaysia. The concept of the project is for lecturers and students to produce artwork that revolves around the message of sustainability and 90% of the artwork must use recycled waste materials. The visual analysis of '*Hidden*' covers five aspects of visual elements which are composition, focal point, colour, form, and symbolic value. It was found that there are multiple deepening sustainability messages within the artwork through the analysis of the actual meaning of the image, the estimate changes in meaning over time, and the student's reflection and reaction. The main questions addressed by this article are: What are the complex 'pool' of sustainability messages generated through a single image? How producing art can stimulate students' consciousness on the importance of sustainable living? In conclusion, this article proposes that AESD is a positive and useful approach for students to embrace the sustainability culture.

1 Introduction

Art education in the area of sustainable development is a rather new field of research. When one talks about sustainability, the most common understanding will be related to the environment, economy, and social issues. However, art education has a purpose to educate society through creativity, consciousness, and liberation as part of the transformative pedagogy (Illeris, 2012). With such innovative methods of teaching, art education can sharpen learners' capacity to adapt and practice the learning value. The process in producing design work, for example, requires learners to actively participate, investigate and experiment with multiple elements in which directly or indirectly, their gained skills will then turn into long-lasting knowledge (Cadarsó, 2015). Even though art educators can recognise the value in learning arts, it is also important to measure the impact to understand how art lessons can contribute to students' characteristics and personal development (Cerkez, T & Gabriela, B, 2013). This is in parallel with the effort to ensure sustainability in art and art education can be a contributing factor to students' livelihood.

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The concept of sustainable development is to have the produced resources that serve human needs to preserve instead of destroying the built and natural environment. The preservation is not only to benefit the present but also for future generations (Pociovalisteanu, D. M., Silvestre, B., Novo-Corti, I. & Rabontu, C. I., 2016). As for the aspect of cultural sustainability, it can be seen through the constructive aspects of human well-being and how adapting to the habit of living sustainably can satisfy the full need of the people (Thorpe, 2011). The role of education is not only to educate or create awareness on sustainability but also to nurture a good attitude and promote responsibility among learners. Educational projects could be aimed to educate and explore the alternative to contemporary human practices but with additional concerns on nature and ecological interdependent cycles (Illeris, 2012). This is where art education can be of assistance in motivating learners through participatory art projects that could be embedded with sustainability learning value. Through art experiment, content creation, or human interaction, Art Education for Sustainable Development (AESD) has much potential to achieve the world's sustainability goal.

According to Cerkez and Gabriela (2013), there are two points of view in sustainable art education; one that is represented in the meaning or value of the art project, and the other represented in the re-use of materials of the artwork. From both of these approaches in the AESD project, students are able to work on concepts where it could be about finding solutions to a problem from an art or design perspective (Cadarsó, 2015). In parallel to this, Matsui (2018) states that techniques in teaching art can enhance learners' empathy which will then lead to their personal development of bringing the sustainability culture to their daily practices. These are examples where innovation can take place for a more sustainable communication of important messages (Kohler, Weith, Hartel & Gaasch, 2016). Through an art project, one can create meaningful art pieces to convey important values that are related to social or environmental issues.

Many artworks produced via AESD projects are now created within the sustainable theme to convey multiple messages on the seriousness of the issue and to affect participant's behavior. Therefore, it is important to investigate the extent of sustainability messages that can be delivered through artwork and the impact it has on student's consciousness from producing the artwork and participating in the AESD project. Thus, this research article is guided by the following questions:

1. What complex 'pool' of sustainability messages can be generated through a single artwork?
2. How producing art can stimulate a student's consciousness on the importance of sustainable living?

2 Methodology

This research is based on an art and design project that was conducted at the Faculty of Communication, Arts & Media of the International University of Malaya-Wales (IUMW). One of the artworks produced called '*Hidden*' was chosen for a visual analysis study. The reason for selecting this particular artwork is because it was accepted in a national art competition, Waste to Art, 2019. Additionally, a semi-structured interview was conducted with the artists who are also one of the participants of the art project. The data from the interview will then provide the exploratory aspect of the study.

2.1 Visual Art Analysis

The visual analysis involves studying cues or signifiers within visual languages that could include symbols, signs, images or any other visual elements (Isikoren & Kalkan, 2017). Most

of these elements are governed within the composition of the image. This is a suitable method to understand further the design concept and the value it carries (Gitelman, Ryzhuk & Kozhevnikov, 2019). The meaning and value can be composed to carry important messages for the audience to interpret. For this particular research, there are five aspects of visual elements to be analysed which are composition, focal point, colour, form, and symbolic value.

2.1.1 Hidden

'Hidden' was an artwork produced in art and design projects at a university. The project requires participants to produce an art piece of the theme "The Secret to Waste" based on the annual national competition, Waste to Art, 2019. Additionally, the art piece has to be 2-dimensional with 90% of the artwork must use recycled waste materials. As portrayed in Figure 1, *'Hidden'* was created by using more than 13 different types of waste materials which includes plastic straws, bottle caps, trash bags, bubble wraps, metal scrap, chain, used cardboard, toys, glasses, newspapers, batteries, dish bottle, plastic cup, paper napkin, tissue paper, and a few other materials. The size of the artwork is 5 feet by 5 feet on a framed canvas in which it is meant to be hung on a wall. This artwork was created by a student and a lecturer of the faculty and it was accepted to participate in the Waste to Art annual competition and manage to proceed up to the final round of the competition.

2.2 Semi-structured Interview

A semi-structured interview was done with the artist of the artwork who is also one of the participants of the art and design project. The interview will be based on the artist's perspective on the actual meaning of the image, the estimate changes in meaning over time and the reflection and reaction after participating in the art project. Additionally, the interview was done after several months the project has completed identifying the effect it has on the artist's behaviour. The questions are open-ended in which the interviewee has a more free flow of thought and is able to fully express her opinion.

3 Findings

The findings of the research are based on the visual analysis of *'Hidden'* and the semi-structured interview with the artist.

3.1 Findings from the Visual Analysis of *'Hidden'*

The visual analysis of *'Hidden'* covers five visual elements; composition, focal point, colours, form and symbolic value. The artwork can be seen in Figure 1 below. From the visual elements shown in Figure 1, the work was created based on the concept of sustainability and excessive trash. As the artwork is in a reflection of the theme "A Secret to Waste", the meaning and values of the signifier were analysed following this particular theme.



Fig. 1. Hidden

The first analysis is on the composition which covers three elements; emphasis and scale, balance, and rule of odds. The second analysis is on focal points which cover the point of scale and point of isolation. The third analysis is on colours which cover value and intensity. The fourth analysis is on the form which covers organic forms and abstract forms while the final analysis is on symbolic value. The details of the visual analysis can be seen in Table 1 where the meaning is being presented in accordance with the visual image and elements.

Table 1. Visual Analysis of 'Hidden'

	Visual Elements	Visual Image	Meaning
Composition	Emphasis and scale	The artwork emphasises on the big size of a keyhole in the middle as opposed to the small size of the key hidden among the trash.	This is to show the keyhole attached to the door is the point of escape however, as obvious the answer may seem, it can only be open with a key that is so hard to find.
	Balance	The balance can be seen in which half part of the image is covered with the trash and it almost covered the keyhole in the middle while the other half is still clear of trash.	This shows that it is only a matter of time for the trash to keep flowing to fill up the rest of the space and eventually covering the whole keyhole.
	Rule of odds	The rule of odds can be seen with the big keyhole in the middle, which is being offset at the centre with the	The meaning of this will be that the importance of having the keyhole always be seen and available as the sign of

		signboard on top and the diagonal features of half full of trash and the other is clear of trash, actually created a simple natural balance.	hope, goal, and direction in which it was placed in the middle. The rest of the elements to offset the position is to represent the obstacles.
Focal Point	Point of scale	By scale, the big focus will be the image behind the keyhole as the keyhole is presented in a big size, the focal point would be the view behind it.	This is to present the direction in which the audience should think of going and that is to escape unpleasant situations and step into paradise.
	Point of isolation	By isolation, there is a paper cup at the top right corner which is the starting focal point of the trash flowing down. It is isolated to a corner of the image.	This is to show the origin of all the rubbish and trash which comes from the excessive usage of waste materials and how it keeps on increasing as the flow does not stop.
Colours	Value	The colours seen from the image are mainly of darker value and warm colours such as brown, yellow, black and patches of white. Warm colours are most often related to nature or something bold.	The use of warm colours is relevant to convey a serious message on the importance of sustainable living in order to preserve the beauty of our nature.
	Intensity	The two intense colours would be the strong glow of yellow that shines through the middle of the image against a darker brown and black surrounding the keyhole.	The opposite intensity of colours is to present the message of a darker life full of problems, obstacles and unpleasant things where else the light glow of yellow presents a glimmer of hope and escape to heaven.
Form	Geometric form	The geometric form can be seen from the shape of a keyhole in the middle of the image and a key stuck within the trash where it does not look like the real item but it presents the idea of it.	This keyhole is meant to look as if someone can peak into it to see what is on the other side of the door. This conveys a message where the right key is needed to open the door and the key can be seen within the trash shows that only with determination and the right attitude, can a person reach out for the key.
	Abstract form	The abstract form can be seen from the arrangement of the trash coming out of the paper cup that signifies the flow of water.	The shape of trash arranged to imitate the flow of water from a paper cup conveys a meaning of how people are oblivious with their use of waste materials and that rubbish and trash are now flowing non-stop like how water flows from a pipe.

Symbolic Value	Escape to nature	This symbolic value can be seen from a straight perspective that signifies a journey through nature surrounded by trees, leaves, grasses as presented in the middle of the image.	From the look presented behind the keyhole, one can see an escape to a more beautiful life. This is to show that whatever chaos and dark life we are living in, we can still make our escape.
	The secret to a better life	This symbolic value can be seen from the signboard showing a missing key which is meant to be used for the keyhole in which viewers are supposed to look for among the trash.	The symbol of looking for a key among the trash is to convey that in order for a person to escape, they need to find the right key and in order to do that, they need to handle the obstacles and clean up the mess. Only then, the key to a better life can be retrieved. Thus, the secret to living in paradise is for us to clean up our act.

As shown in Table 1, the visual analysis conducted on ‘*Hidden*’ manages to uncover 11 complex pools of messages about sustainability issues. These messages were gathered after analysing the visual elements from the images presented in the artwork. The messages are relevant to the idea of finding ways to escape unwanted and undesired lifestyle from the consequences of bad habits. For one to seek heaven and surround themselves with the calmness and comfort of nature, one will need to recognise the problems at hand in which they are expected to self-regulate and have a tighter discipline to embrace a more sustainable living in which for the case of ‘*Hidden*’, it is to emphasise the importance of recycle.

3.2 Findings from the semi-structured interview

The semi-structured interview was done with the artist of the artwork who chose to remain anonymous throughout the research. List of discussion and questions asked revolve around the actual meaning of the artwork, the estimate changes in meaning over time and the artist’s reflection and reaction from participating in the art and design project at the faculty.

The artist finds that the real meaning of the artwork is about discovering a secret that everyone wants to know and would love to take a peek. Most people always want to discover something behind closed doors in which they are intuitive and curious and most of the time, they hope to see something beautiful.

The birth of the idea of this artwork called “Hidden” is from the essence of the word secret. When something is hidden, people will always try to look for it and in many cases they will try to peek at whatever they can. They hope to find something captivating and worth it.

Additionally, the artist states that there is a symbol to signify a place where people would want to escape and live a better life. But without any effort, they will be stuck in a dark room in hope they will find a solution on how to make their escape.

Looking out of the keyhole will be a hidden sanctuary of beautiful scenery with green trees, blue skies and fresh air to entice people to escape. However, there are so many trashes almost covering the keyhole where the door leading to the sanctuary is blocked. There is a hidden key in the pool of garbage that can be used to unlock the door. With that, the only way to

escape the room is to clear up the mess. Only then, the secret door to the sanctuary can be open and people can escape from the room.

It is clear that the artist embedded the message of sustainable living within the art piece by using several visual elements as the cues and signifiers in conveying the message. When asked about the value of the meaning overtime, the artist states that it will depend on which outcome we will face in the future. If overtime, people make an effort to live sustainably, the next question will be how long will it take to recover back the planet. If overtime people still do not act accordingly, then the question will be how long will it take to destroy the planet.

From the artwork, the message is clear. It is to show that either people manage to clean the mess and live in sanctuary, or will they let the trash keep on flowing until it covers the whole keyhole and eventually the door to escape. How the messages are to change overtime will depend on which direction people chose to act upon.

As for the artist's reflection and impact, the art and design project seems to be able to make the artist see reasons that changes need to happen to solve the problem. It seems that the recognition of the severity of the issue occurs while the artist brainstorm about the concept that requires extra reading, research and deep understanding of the issue.

Upon the project brief, there is a lot of thinking involved on what image to use, what elements to compose and where to get the materials. To come up with something meaningful, I have to understand the issue deeper and thus, it makes me understand the seriousness of our bad habit. When I collected the materials, there were a lot more waste materials left in which I decided to help by keeping those for the next art project. At least I manage to contribute whatever little ways that I can to save the environment.

Besides which, the artist also states that before participating in this art project, the artist will not opt for using waste materials to produce any artwork. This particular experience though managed to spark and stimulate the artist's interest to challenge herself to be more creative in using unorthodox materials while contributing in whatever she can to embrace the culture of living sustainably.

4 Discussion

What complex 'pool' of sustainability messages can be generated from a single art work?

The visual analysis provides evidence that the outcome of an art project from AESD can convey the deep meaning of sustainable living through the produced artwork. The key messages were conveyed through the use of visual elements that carry specific meanings directed to the viewers. As stated by Cadarso (2015), art and design approach can be used to present a concept or solution to a problem. From the visual analysis of 'Hidden', there are 11 complex messages delivered about sustainability issues from a single image. By using 11 visual elements, the generated message includes seeking for clarity, undergoing time restraint, generating hope, clear direction, identifying root problems, nature preservation, having the right attitude, encouraging discipline, finding ways to escape and finally having the solution to a problem. The messages generated from an art project can lead to students' personal development (Matsui, 2018). Sustainable art projects are not only about sustaining the use of materials but also to enhance the sustainable practice through art culture (Cerkez & Gabriela, 2013). Thus, besides only conveying meaningful messages to the audience, art students are also able to reflect deeper into the value of the produced art piece. Looking back

at the uncovered messages from the visual analysis, images used in the artwork are used as cues such as a visual of a key is used to present hope in finding solution, keyhole is to present the positive direction, signboard presents the action that needs to be taken and by combining all cues and messages, the ultimate goal is to convey and only by living sustainably, one can hope to experience sanctuary.

How producing art can stimulate students' consciousness on the importance of recycling for more sustainable living?

Evidently, from the exploratory research AESD can increase student's consciousness on the importance of sustainable living. As reported, an artwork was created from an in-depth research of the subject matter which then leads to a deeper understanding and appreciation of sustainable initiative. Adapting to a positive habit first requires one to have the desire to change which could occur if it satisfies their needs (Thorpe, 2011). From the research, one can see how producing an art piece is not only able to increase awareness but also to develop a new practice that could help sustain the environment such as using waste materials to produce beautiful artwork instead of turning it into the trash. This is how educational projects are able to explore ways and opportunities to solve problems through art perspective (Illeris, 2012). Students' involvement in generating ideas, delivering concepts and producing sustainable art pieces results in their ability to embed the message presented in the artwork into their conscious mind.

5 Conclusion

This study shows evidence that AESD is able to contribute to the effort in creating a culture of sustainable living. Learning through art is not only able to increase students' handwork skills but also affects one's empathy and mindfulness. There are at least two positive angles AESD's contribution can be seen; one being the ability to convey important messages through captivating artwork, and another is by affecting students' behaviours through their conscious mind while working on the sustainable art project. As a conclusion, AESD is a positive and useful approach to sustainability.

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