

# Learning Environmental Issues Through Documentaries: Exploring the Perceptions of University Students

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Documentaries are a dominant media that can create an awareness of environmental issues. Despite existing studies on the use of media such as documentaries in tertiary education, there is limited scholarly literature on the use of documentaries, specifically for an educational setting. By employing a qualitative study, the researcher attempts to explore the students' perception of the use of documentaries in engaging them with environmental issues. This research involved an in-class research project with 37 third-year and fourth-year undergraduate students from various faculties in a university in Kuala Lumpur. The findings indicated that students expressed positive viewpoints about the use of the "Home" documentary in this assignment. Three themes emerged: (i) documentaries evoke students' environmental awareness, (ii) documentaries connect students to current environmental issues, and (iii) documentaries may enhance students' learning experience. The study also suggests that using documentaries to expose students to real issues develops the students' pro-environmental disposition.

**Key words:** *documentary films, environmental education, higher education.*

## Introduction

Our natural environment is facing a significant threat. Global warming, ozone depletion, haze, the greenhouse effect, and rising sea levels are already affecting our lives (Arslan et al., 2012; Buchanan, Pressick-Kilborn, & Maher, 2019; Ekborg & Areskoug, 2012; Wigley, 2018). Issues such as plastic waste and habitat destruction have already reached a global scale (Van Sebille et al., 2015). Such changes and problems demand increased collective and

individual efforts to maintain and restore ecosystems.

In Malaysia, environmental science is included in the lower secondary science curriculum (Teng, 2012), and in the final chapter of the secondary school biology curriculum (Ministry of Education, 2005). However, studies have found that students tend to assume they have already understood scientific conceptions of environmental issues, and teachers believe that students have prior knowledge about them. Thus, teachers often consider this topic a “self-study” topic when finishing the syllabus at the end of the school term (Daniel, 2011; Teng, 2012). Besides, living in a tropical country near the Equator with hot, sunny weather throughout the year, Malaysian students have limited experience of the negative impacts of global environmental issues such as the increase of global temperature, melting polar ice caps, or rising sea levels. Students have only been exposed to these concepts through printed or electronic resources such as books, magazines, posters, and the Internet. They are, however, unable to experience intense heat compared to people living in cold countries near the North Pole and the South Pole. As a result, many students in Malaysia are not adequately aware of other critical issues that threaten the lives of living things on Earth (Teng, 2012).

The lack of awareness might affect students’ sensitivity toward environmental issues, resulting in them being unable to react to environmental problems in a sensitive way, as suggested by Hansman (2009). This claim was further supported by other researchers (Bellino & Adams, 2017; Hungerford & Volk, 1990; Teng, 2012) who mentioned environmental knowledge as a prerequisite for behavioural change. Young people should invest in the environment’s future, as their actions today will significantly influence the future. Thus, the pedagogical approaches underpinning environmental education should be highly effective in both gaining young people’s interest and promoting considerable changes in behaviours (Bellino & Adams, 2017; Cunningham & Cunningham, 2010).

In environmental education, media such as documentaries are widely used as one mode for telling stories about the environment (Ashraf, Shafiq & Batool 2017; Liu, 2018). Educational media is any media often employed for education. Educational media can be used in almost any discipline to enhance learning. It can be used formally in a lecture or in the classroom to complement lessons. Some examples of educational media include film, television clips, written articles, blog postings, and documentaries. These media can reinforce various concepts and stimulate discussion among students. Research suggests that students learn abstract concepts effortlessly when they are presented with both verbal and visual forms of the concepts, as visual media helps students retain concepts and ideas (Willingham, 2009; AyukAko, 2017). Documentaries have filled an important role in education. According to Liu (2018) and Bahk (2010), the audial, visual and narrative experiences in documentaries have great potential to reach and influence students regarding environmental issues.

The role of documentaries in different disciplines has also been explored, in language education (Paran & Duncan, 2019), psychology (Simpson, 2008) and environmental education (Guler & Afacan, 2012; Liu, 2018). When used effectively, such as to enhance a task, with a written reflection by the educator, documentaries may help students to develop social and emotional understanding in ways not available from books or lectures. Students can experience the world through real-life perspectives, as well as observe what it is like for a person living around the world (Guler & Afacan, 2012; Aziz, Manab & Othman 2016; Liu, 2018). Barbas (2009) found that non-verbal, less conventional documentaries are more effective in developing environmental knowledge and feelings about insects, than traditional media. Another study by Bahk (2010) found that narrative films could also be effective educational and motivational tools, due to their ability to create suspense, their non-invasive ability to present environmental issues in a natural setting of life experiences, and their capacity to provoke emotional, empathic responses. Reid (2012) found that participants learned substantially through a documentary exploring the uses of human cloning in stem cell research, although they did not necessarily develop more positive attitudes toward the topic.

The effectiveness of documentaries on achieving desired learning outcomes has also been highlighted in recent studies. For instance, a study by Nolan (2010) revealed that after watching a documentary, participants exhibited more knowledge and concern about global warming. The findings also indicated an increase willingness by students to reduce greenhouse gases through behavioural change. Minocher's (2015) examination of student engagement with contemporary environmental issues through documentaries, and the effect of social networking usage upon engagement, found an increased engagement by undergraduate students in environmental issues, through civic behaviours and participation. Therefore, the abovementioned studies articulated a great potential for employing documentaries in the teaching and learning of environmental issues, and in enhancing students' knowledge, attitudes, and behavioural disposition.

Documentaries have been widely used by educators in higher education, as a source of information and as a teaching tool to support students in learning about the environment and environmental problems (Liu, 2018; Bahrin, et al. 2018). Yet many unanswered questions still remain about what makes documentaries an effective tool to help students explore a wide range of relevant environmental issues. Hence, the purpose of the present research is to investigate undergraduate perceptions about using documentaries for teaching and learning environmental education and about sustainability. This research focuses on the following research question: How do undergraduate students perceive documentaries as a tool for teaching and learning an environmental education and sustainability course?

## **Methodology**

### ***General Background***

By employing qualitative methodology, the researcher attempted to illuminate how incorporating a reflective practised assignment into the coursework encouraged and challenged students' environmental awareness. The research was designed to be used in an environmental education and sustainability elective, at a public research university in Kuala Lumpur, Malaysia. By introducing an environmental documentary, the researcher is hopeful that the study can help explicate the effects of documentaries on the relevant attitudes and perspectives of undergraduate students.

### ***Participants***

This research involved researchers working independently on an in-class research project with 37 third-year undergraduate students (14 male, 23 female) for half of the semester (8 weeks). The students ranged from 21 to 24 years of age. The course, *Education for Sustainable Development*, allowed students to develop a complete understanding of sustainability issues, as well as to develop skills that will enable them to apply tools to nurture a more sustainable future. Participatory teaching and learning methods used in this course motivated and empowered students to act, as well as to develop critical thinking skills as they imagined future scenarios and participated in collaborative decision-making. The course was an elective course that involved students from all faculties such as the Faculty of Arts, Built Environment, Language and Linguistics, Computer Science and IT, and Engineering. The undergraduate students included local and also international students from countries such as China, Indonesia, and Iran.

### ***Procedures and Data Collection Technique***

The researcher examined a general environmental studies course, where an environmental documentary was selected to address relevant environmental issues. The selected issues formed the main topics and contents during the study. The emphasis of the course was the use of documentary films to help students explore a range of critical environmental issues, and to think critically and reflectively about these issues. The documentary film, "Home" by Yann Arthus-Bertrand, was chosen for this study. The 93 minute award-winning documentary was almost entirely composed of aerial shots of various places on the earth. It showed the diversity of life on Earth and how humanity was threatening the ecological balance of the planet. The researcher found that the documentary explained the urgent environmental situation that must be resolved, so that our planet will not suffer more catastrophic damage from climate and environmental disruption.

The style of the film made it educational for the audience, especially for undergraduate students who possessed a basic scientific understanding of environmental processes. According to Liu (2018), environmental issues are relevant to science education, because understanding of these issues is rooted in science. It is essential in science education to engage students in scientific practice and to link science and society. The “Home” documentary showed a vast number of local and global issues that must be resolved. The compelling and captivating documentary involved high-resolution cinematography that presented our global environment to the viewer. It included a beautifully shot panorama of the Earth and the damage done to it by civilisation, with a holistic narration about the evolution of the Earth, nature, agriculture, humans, and the crises of habitat destruction, energy depletion, climate disruption, degradation of the environment, health, and economic disparity.

The course was intended to present a wide range of real issues using visual, narrative presentations through the documentary, in combination with classroom lectures and discussion sessions. This provides an optimal combination of inputs to generate the most engagement and commitment to learning environmental issues. Students were given a week to watch the documentary on their own. During each lecture session for eight weeks, the students needed to work in groups, sharing and comparing their ideas, and to discuss the pros and cons before making a judgement or decision regarding a particular scenario, based on the areas of concern highlighted in the documentary.

The students were asked to analyse the scenes, narrations, regions and specific local issues presented in the documentary, as well as explore issues such as urbanisation, industrialisation, overpopulation, water, trees, oil, and human migrations from diverse perspectives. After discussions in small groups, the students were asked to share their thoughts with the entire class. The researcher played her part as a facilitator with a focus on encouraging students to listen and share, rather than offering opinions or drawing specific conclusions. At the end of this task the students submitted their reflection essay, about their experience using the documentary. The essay was required to be uploaded to the e-learning portal of the course. This task was also used as part of their continuous assessment with a weightage of 20 per cent. The following questions in Table 1 were given to the students to guide them when writing their reflections.

**Table 1:** Student reflection guide

Number	Question
1.	How much did you know about the subject before we started this course?
2.	Would you describe the major issues and concerns in this documentary as essential and important or not? Why? Why not?
3.	Do you think the documentary tells “the truth”? Please describe.
4.	To what extent did the documentary leave you with a sense of involvement, hope, excitement – or maybe with a mixture of such feelings? Why?
5.	Do you feel that this documentary enhances your understanding of environmental issues? Why yes/why not?
6.	To what extent did the documentary engage, interest and captivate you? Why?
7.	Is using documentary relevant in enhancing your sensitivity of environmental issues?
8.	Are there any other approaches that you would like to explore in learning environmental issues?

### ***Data Analysis***

Students’ reflections were analysed using constant comparative data analysis technique (Corbin, Strauss, & Strauss, 2015). This data analysis technique was utilised to answer the questions posed by this research. It involved coding, categorising and developing themes based on information from the collected data, to best describe the researched phenomenon. This is in line with the view that refining the thematic framework of the research involves logical and intuitive thinking, to ensure that the research objectives are appropriately addressed (Merriam & Tisdell, 2015). The researcher’s observation notes during the discussions and throughout this research were also used, to triangulate support the research findings.

### ***Validity and Reliability***

Validity and reliability are two issues that should concern any researcher designing qualitative research (Golafshani, 2003; Merriam & Tisdell, 2015). Qualitative researchers need to ensure the rigidity of qualitative data without sacrificing its relevance. In this research, the themes identified during the data analysis were evaluated through peer review. External peer review can enhance the credibility and trustworthiness of qualitative research (Patton, 2002). In this research it involved an expert from the field of environmental education and qualitative research methodology. The expert independently reviewed the emerging themes from the findings and provided constructive comments and feedback.

### ***Ethical Considerations***

Prior to commencing the research, ethical clearance was sought from the undergraduate students. They filled an online informed consent form as proof of their acceptance. All the participants taking part in the study were voluntary. They were assured of their confidentiality and privacy.

### **Findings and Discussion**

The findings illustrated students' positive viewpoints about the "Home" documentary in this course. The gathered data from reflective writing were plentiful, as the feedback came from third-year and fourth-year undergraduate students. This is probably due to the maturity of the participants. They showed great interest and commitment, both towards the task generally and during the lectures. Three themes emerged from analysis of the students' reflections and the researcher's observation notes: (i) the documentary evoked the students' environmental awareness, (ii) the documentary connected students to current environmental issues, and (iii) the documentary enhanced students' learning experience. In this section, the findings and discussions will be simultaneously explained, as it will bring more meaning to the interpretation of the emerging themes.

#### ***Documentaries Evoke Students' Environmental Awareness***

This theme is concerned with how undergraduate students described the experience that evoked their environmental awareness. Students' reflections explained how they became *more sensitive towards the environment and issues surrounding the planet*. In order to capture and maintain students' attention, educators need to reach them emotionally. The documentary has created an emotional connection with the students, as suggested by the following excerpts:

"Little did I realise how selfish have we been while chasing development, modernisation, and digitalisation until I watched this documentary...what have we done to our lovely planet over the years as a result of our irresponsible behaviour?" (Student 10, ln. 2-3)

"To be honest, the documentary left me a sense of mixed feelings. From excitement to have a chance to see the very initial appearance and beauty of the globe to the sadness of the lifestyle of the owner of the Earth, flora and fauna had been changed negatively due to human's development" (Student 4, ln. 12-13)

"I had been shocked by the truth as I did not know human was taking so much from our origin root. We abused all the resources on the planet

greedily without preserving and conserving what should belong to it”  
(Student 27, ln. 7-8)

The findings of this study also indicated that these activities had *deepened the students’ environmental values*. According to Tadaki, Sinner, and Chan (2017), the human-environment relationship can affect environmental decision-making. Thus, it is important to enhance the students’ pro-environment values, especially for undergraduate students, as they are important agents of change. Student 22 said that “we, as inhabitants of the world share the same planet and must be careful and considerate not to put other people and the environment in dreadful situations” (Student 22, ln. 6-7). Thus, “our actions will have direct implications and repercussions not only in the place where we stay but also places at other parts of the world” (Student 5, ln. 18). The students were aware that it would be impossible to undo the things that have been done. However, there were things that a human can do to make the situation better. People never trust before they can see the truth.

Students in this study also admitted that the documentary promoted their behavioural change. The line “it is too late to be a pessimist” in this documentary was repeated several times, and it significantly impacted these students. For example, Student 4 explained that “this line left me with a huge sense of involvement to take actions towards making the world greener. I have started doing it, and I feel good about making differences” (ln. 28–30). Student 22 expressed that he had “benefited greatly from the video, as my sensitivity and attitude towards the environment *are now increased and I care more about my potential actions and habits*” (ln. 67).

Interestingly, during the classroom discussion session, one architecture student mentioned that he will be able to contribute to the environment by putting effort into designing a green building that relies on natural lighting, natural ventilation and requires less energy to function. He was hoping that his effort can bring changes to the environment (Student 3, ln. 51). Almost all of the students in this study wrote that they have started to reflect upon their daily activities such as the amounts of plastic that they use. Student 13 also mentioned that he has made “*a commitment to change bit by bit, to get a reusable straw, and to always bring food container and water bottle*” (Student 13, ln. 62). These changes may seem small, but it may influence others and may contribute to improvement in our environment as a whole.

The students were also found to have *deeper environmental values* after taking the course. The environmental values that the students hold will result in a matter of making choices about the environment. Therefore, the inculcation of environmental values should be fostered so that the students will be able to develop values on their own. For instance, Student 15 expressed a better appreciation of the importance of water in supporting all life form, and she realised that “*water should be treated like treasure*”. Student 1 also mentioned that “*if we*

*wait for a superhero to come and save the world, it will take forever...better than waiting, let us be the superhero ourselves because I believe we are all superhero in our stories”* (Student 1, ln. 16). In the classroom, students commonly stated that their understanding of the issues taught had improved in such a way that they became more aware of the environment.

The finding of this theme was generally consistent with previous research (Heimlich & Ardoin, 2008; Liu, 2018), which mentioned that behavioural change is a complex matter and is based on sensitivity and knowledge. However, the ways that the students connect to the environment and environmental issues can be a strong predictor of their environmental behaviour. The level of knowledge about the environment forms the basis of behaviours towards the environment. This is crucial in that it enables individuals to be aware of the consequences of their behaviours (Jeronen, Jeronen, & Raustia, 2009; Bayham, 2016). In this study, the students were found to possess heightened environmental values and were becoming more “eco-centric”. According to McMillan, Wright, and Beazley (2004), ecocentrism sees the ecosphere, which is comprised of all Earth's ecosystems as the source of sustenance. It is a worldview that recognises intrinsic value in ecosystems and the biological and physical elements that they comprise, as well as in the ecological processes that spatially and temporally connect them (Gray, Whyte, & Curry, 2018). The findings indicated that students think more reflectively and critically when it comes to environmental issues after they had been exposed to the documentary.

### ***Documentary Connect Students with Current Environmental Issues***

The second theme that emerged from analysis of the findings is that through the documentary, students were exposed to a range of current and real-world environmental issues. The issues include poverty, consumerism, immigration, modernisation, and the effects of environmental changes. Students were able to *link the information gained from the documentary to their experience and prior knowledge*. For instance, Student 30 was concerned about global warming and stated that *“from personal experience, impact of global warming is also something I feel as hill stations like Cameron Highland and Genting Highlands are no longer as cold as they were when I visited as a kid”* (Student 30, ln. 44). Five students in this study also expressed concerns over the issue of deforestation in Borneo, as the documentary mentioned that Borneo might lose all of its forests within just 10 years, given the current rate of deforestation. Student 22 mentioned that *“to imagine that certain part of Malaysia that is so rich with biodiversity like Borneo, suddenly without greenery, was a very personal and relatable environmental threat I felt”*.

This theme also showed that the students were able to *engage in their learning by building connections to the world*. Just as students use quotes from a book or text to prove an

analytical thought, students use the documentary to justify their reasoning, as shown in the following excerpts from the student's reflection:

*"I would say that the oil and gas industry is a huge problem for the environment. The documentary tells us that humans' continuous greed for energy sources means that we will always look to dig up more oil, natural gas, coal etc. As these are all non-renewable sources, there will come a day when humankind is desperate for alternative energy sources. I argue that this is also a serious issue as this industry massively pollutes the ocean due to oil spillage"* (Student 26, ln. 76).

Through the documentary, the students were able to experience a world beyond their own, especially if the media is sharply different from their local environment. In this documentary, Dubai and Las Vegas were the perfect examples of how capitalism and modernisation change the world. As both cities were previously just deserts, they have to rely on importing lots of food and set up complex facilities to desalinate water for drinking. All this disrupts the balance in our environment, as more land is reclaimed from the sea, while seawater is excessively cleansed for use by humans. Furthermore, global documentaries such as "Home" can transcend boundaries and cultures and act as a powerful tool for inculcating universal human values integral to global education. This concurs well with Vaughan-Lee (2015) who mentioned that documentaries could expose students to any number of global issues, reduce isolation, and connect students to innovations and inspirations from sources beyond their immediate environment.

### ***Effective Use of Documentaries Enhances Students' Learning Experience***

The third theme that emerged from the study was the effective use of documentaries to enhance learning experiences, besides the knowledge and understanding related to the environment. Through collaborative reflection, students were provided with the opportunity to exchange ideas, identify the root causes of environmental issues, argue and support their decisions, and understand alternative perspectives (Liu, 2018; Stern, Powell, & Hill, 2014). The students in this study shared that they did not have much knowledge regarding current environmental issues, before taking this course. For example, Student 3 explained during classroom observation that his knowledge on this subject before watching the video was only partial. He mostly only knew basic facts, but was unexposed to sophisticated scientific reasoning and the linkage between nature and humans, shown by this video. Student 11, on the other hand, shared that even though the concept of sustainability has been introduced in the education system, its implementation was not that meaningful. He could only recall recycle programs where students learn to divide trash into different recycling bins, and some art and craft classes that use recycled material which did not seem effective to him.

The finding showed that the interesting audio and visual components of the documentary helped attract the students' attention and enhance their interest. According to Barbas, Paraskevopoulos and Stamou (2009), narrative films such as documentaries could also be an effective educational and motivational tool, due to their ability to create suspense and their non-invasive ability to present environmental issues in a natural setting of life experiences. Student 28 said that "*documentary certainly did a good job in stirring up my emotions and feelings. For most parts of the video, I could associate strong emotions to certain visual information presented*" (Student 28, ln. 79).

This fact was also supported by Student 37, who loved the idea of using visual media as a medium to deliver important messages and issues. She also mentioned that "*merely reading books and newspapers are often very hard for me to relate and imagine the seriousness of an issue, as there are mostly just words*" (Student 37, ln. 65). Student 6 highlighted that the "Home" documentary is fascinating as it incorporates suspenseful, dramatic, and melancholic music. This type of background music instills terror and forces positive environmental action among its viewers. The striking visuals, on the other hand, managed to stir up the student's emotions and left a memorable impact on them as it ended with a call for action and asked humankind to be responsible consumers. Student 18 mentioned that she was "*really inspired by every scene in the video; it made me want to watch until the end. Every scene from this documentary catch my attention, and I did not want to miss out any details*" (Student 18, ln. 97).

According to Cebrián and Junyent (2015), the teaching of environmental issues requires knowledge, practical skills, tools, attitudes, and ethical values. Thus, tools such as documentaries are useful in enhancing students' understanding and interest, and make an important contribution in helping to conserve, protect, and manage the environment. In the classroom observation, the students were able to make social-environmental judgments and decisions, based on the information put forward in the documentary. According to the students, the documentary enhanced their learning experience because the facts presented in the film are always supported by scientific claims, as mentioned by Student 3 in the following excerpt:

*"The video is also relevant as it utilises plenty of facts to support and prove its claims"* (Student 3, ln. 12-13).

This corroborated with the previous finding by Van Dijck (2006), who argued that the multimedia mix of words, sounds, and images reflects and transforms the claims to knowledge. Scientific documentaries do not illustrate; instead, they corroborate scientific claims by visualising knowledge while substantiating hypotheses. Thus, the documentary is



significant in communicating the importance of current environmental concern, as suggested by Liu (2018). This study had shown that the documentary, when used effectively, can enhance public understanding of science and increase student's scientific understanding, as it is full of educational value.

## **Conclusion**

Returning to the aim of this study, which is to examine the impact of the use of the documentary in an environmental studies course, it is possible to deduce that the findings provided additional insights into how the students perceived their learning experiences and the impact of the course on their thoughts and responses to environmental concerns. This study has also underlined the importance of using media such as documentaries, with its context-based nature, in reaching and influencing students regarding environmental issues. Documentaries have been proved to be very beneficial in actively engaging students and fostering their learning. The students expressed a continued interest in learning more about environmental issues, which may likely influence their participation in environment-related activities. The present study contributes to filling an existing research gap by looking into an environmental studies course, where students were exposed to significant environmental issues through a documentary film. This study, however, was based on responses from a relatively small group of students at a university in Malaysia. Future research is needed with larger sample sizes, and it would be interesting to compare the impact students from different universities or in different countries have through comparative studies.

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