# Do Malaysian Journalists Really Understand What Sustainability Is?

Mohamad Saifudin Mohamad Saleh
School of Communication, Universiti Sains Malaysia
saifudinsaleh@usm.my

Nik Norma Nik Hasan
School of Communication, Universiti Sains Malaysia
niknorma@usm.my

**Abstract:** Is it important to educate the media on sustainability? This paper debates the need for sustainability education to be nurtured among media practitioners in Malaysia. Media play a vital role in educating society in three main areas of sustainability including environment, economy, and social justice. In this paper, six media practitioners from two local Malaysian printed media organizations, *The Star* and *Utusan Malaysia,* were interviewed to gauge their understanding on sustainability education, perceptions on their pivotal role in sustainability education, and the challenges they face in the process of educating society about sustainability issues. The findings of this study show that most Malaysian media practitioners displayed a clear understanding about sustainability education and they also realized their responsibility for not only informing but also educating society about sustainability issues and the importance of sustainable lifestyles. The ultimate challenge the media faces in terms of sustainability education comes from the media organizations themselves, such as the existence of gatekeepers who control the news. Overall, this study demonstrates that the Malaysian media's involvement in sustainability education is no longer a myth. We hope that this study may provide direction in sustainability education not only among the Malaysian printed media, but also for developing and Southeast Asian countries, and the rest of the world.

**Keywords:** Malaysia, media, sustainability education, understanding, roles, challenges

*Mohamad Saifudin Mohamad Saleh is currently a lecturer in Journalism Department at School of Communication, Universiti Sains Malaysia. He holds a PhD in environmental communication from the Faculty of Sustainability, Leuphana University of Lüneburg, Germany. His area of specialization include environmental (sustainability) communication, media and environmental non-governmental organizations (ENGOs) studies.*

*Nik Norma Nik Hasan holds a PhD in Environmental Journalism from the University of Canterbury, New Zealand. Nik Norma Nik Hasan is currently affiliated to USM School of Communication as a lecturer. Her areas of interest are: Science and Environmental Journalism and Environmental Risk Communication. Her interests have taken her toward researching environmental issues in media, as well as ethical aspects of environmental newswriting.*

**Introduction**

A few decades ago, the concept of sustainable development was first introduced to the world during the United Nations Conference on Human Environment (1972) in Stockholm, Sweden. Fifteen years later, in 1987, the concept of sustainable development was again extensively debated by the world environmental community in one of the most historically significant environmental meetings: the World Commission on Environment and Development (WCED). After the conference, sustainable development has been explicitly conceptualized as "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 43). Despite this history, some critique the expressions of sustainable development as vague and controversial. For others, sustainable development is only a label, whereas another group claims that the two words are logically incompatible. Gadotti (2007) contends that the word 'sustainable' goes beyond the preservation of natural resources and a kind of development without harming the environment. It involves human beings finding a balance between themselves and the planet for future survival. Therefore, he argues that the concept of sustainability should be part of educational discussions.

Since 1987, the concept of sustainable development has been widely used by academic scholars from all around the world. Realizing the indispensable nature of education in sustainable development, the concept of sustainability education was introduced at the World Summit for Sustainable Development (WSSD) or Earth Summit initiative that was established in Johannesburg in 2002. The introduction of sustainability education was intended to be an essential tool in achieving the goal of sustainable development. However, the same critics of the concept of sustainable development are active in education for sustainable development (EfSD). Also argument exists on whether to accept EfSD as more efficient than environmental education (ED). The difference between the two is that environmental education deals with environmental issues and social issues separately. Without a social concern in mind, the concept of 'sustainable development' loses its meaning. During the declaration of the Decade for Education for Sustainable Development (EfSD) in 2002, the United Nations highlighted the difference between ED and EfSD. ED focuses on humankind's relationship with the natural environment and on ways to conserve as well as preserve it, and properly manage its resources. EfSD, on the other hand, 'encompasses environmental education but sets it in the broader context of socio-cultural factors and the socio-political issues of equity, poverty, democracy and quality of life'. While a number of potential key stakeholders have been recognized as playing a vital role in sustainability education, including academic institutions, social actors, like scientists, the media, and environmentally-related non-governmental organizations (NGOs), etc., this paper focuses on the role of printed media, particularly Malaysian newspaper organizations in educating the public about sustainability issues, and the challenges faced by this social actor during the educational process.

**The Primary Concept of Sustainability Education**

It is important to have a clear understanding of the two nebulous core terms, *sustainability* and *education*, before sustainability education is defined as a whole. The term 'sustainability', in its fundamental meaning can be described as the ability to 'support', 'borne up', 'endured', or 'maintain' (Bañon Gomis et al., 2010). Meng (2015) defines sustainability as a term that is

generally associated with the concept of long-term maintenance for the sake of the future generations, which is similar to the concept of sustainable development. More specifically, the vision of sustainability is to ensure a better life among humankind via the balancing of three pivotal aspects including the environment, economy, and social justice (Sherman & Burns, 2015; Wang et al., 2012; Lee, 2011). On the other hand, education in the most basic definition can be understood as a systematic process of acquiring and transmitting knowledge, value and skills from one generation to another (Ngaka, Openjuru & Mazur, 2012).

By understanding both the basic terms of sustainability and education, the interdisciplinary term of sustainability education can be understood as an educative process on sustainability issues including economic, environment and social justice either through formal, non-formal or informal educational system. The United Nations, through United Nations Decade of Education for Sustainable Development (2005-2014), states that education for sustainable development is the teaching and learning of key sustainable development issues like climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption (UNESCO, 2015). Through sustainability education, it aims to empower learners to change their behaviour and take action for sustainable development (UNESCO, 2015).

**Sustainability versus Environmental and Science Education**

The terms *sustainability education*, *environmental education* and *science education* have often been associated with one another and this has created confusion among the public. Thus, it is crucial to carefully clarify these three concepts. Sustainability education refers to the concept of educating the society on the following issues: economic, environment, and social justice. Environmental education is more specifically focused on educating the public about ecological or environmental matters (McLean, 2013) such as air pollution, haze, landslides, tsunami etc. The fundamental goal of environmental education is in line with sustainability education: to produce environmental citizenship that is well equipped with knowledge on environmental issues as well as positive attitudes and practices in terms of protecting and conserving the environment (Ors, 2012; Tidball & Krasny, 2011). In this way, it is similar to the aim of sustainability education (Navarro-Perez & Tidball, 2012). Most importantly, environmental education, is intended as a tool to solve massive environmental degradation (Halder, 2012).

The goal of science education is to produce future scientists who are well versed in scientific knowledge (Osborne, 2007), such as chemistry, with the aim of solving environmental problems (Karpudewan, Zurida, & Norita, 2011) and consequently achieving a sustainable global future society (Daniel, 2013). Although sustainability, environmental, and science education each offer a different scope and focus on related issues, they are connected as shown in Figure 1 below.
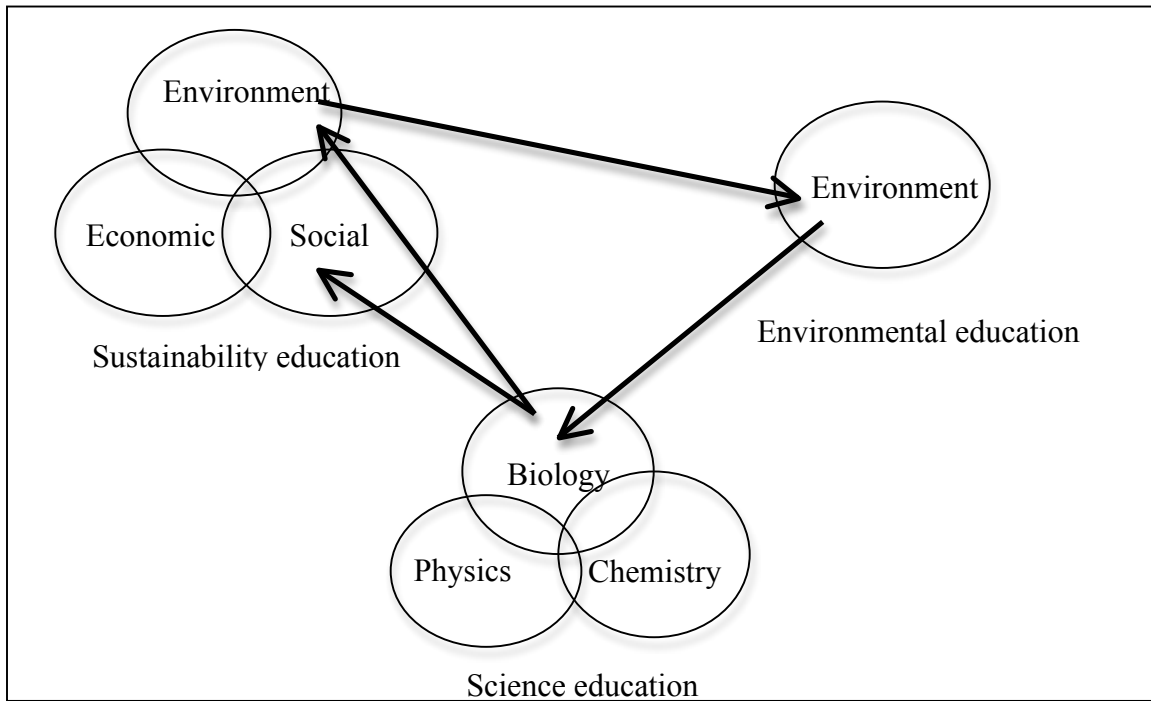
Figure 1: Illustration of the connection between sustainability, environment
and science education

Sustainability, science, and environmental education are connected by their focus on environmental issues. Similarly, some scientific issues like climate change or tsunami are also somewhat vague and can be categorized into both environmental and scientific issues. Health issues under science education are also related to social issues i.e. healthcare under the sustainability education. Therefore, in this paper, the researchers include environmental education and science education under the umbrella of sustainability education as long as it is purely environmental issues. Other issues under science education which are not environmentally oriented as well as too scientific in nature such as aerospace or chemistry engineering will not be included in this study.

**The Contemporary of Sustainability Education in Malaysia**

Malaysia is a developing country located in the heart of Southeast Asian, adjacent to Singapore, Thailand, Indonesia and Brunei. Malaysia is a federated nation with a combination of thirteen different states. Since its independence in 1957, Malaysia has undergone phenomenal growth in its economic, social, and political development. Known as the 'Tiger of Asia', it is a high to middle-income country in Asia (Daniel, 2013), with a GDP per capita for Malaysia in 2013 of USD 10,500 (The World Bank, 2015). Politically, Malaysia practices constitutional monarchy with a parliamentary democracy in which the prime minister leads the nation with the advice from the *Yang Di Pertuan Agong* (king). Socially, Malaysia is a multi-racial nation that has reached a population of 30.2 million, compared to 8.16 million in 1960.
Like other developing countries, Malaysia has supported the implementation of economic, social and environmental sustainable development initatives. For instance, in an effort to eradicate

poverty, the Malaysian government has established several national policies such as the National Development Policy (NDP), National Vision Policy (NVP) and Vision 2020. The implementation of these policies has had a positive outcome as the poverty rate in Malaysia which has declined to less than five per cent and it is expected to soon reach zero per cent (Noranida & Khairulmaini, 2014). In addition, several national policies have also been implemented to ensure the protection of the environment including the National Policy on the Environment (2002) and National Green Technology (2009). Both policies aimed to integrate sustainable environmental projects in all sectors.

Sustainability education in Malaysia is rather limited to the role of government, higher educational institutions, corporate entities, and non-governmental organizations. Universiti Sains Malaysia is one of best examples of a local prestigious public university that focuses on accelerating the implementation of sustainability education in Malaysia via several strategies like offering more courses in sustainability such as science and environmental journalism under the School of Communication, promoting the idea of a 'green campus', conducting sustainability educational programs with schools, incorporating sustainability in its university management system and many more. Local media, especially the print media, are still not playing active role in educating the public on sustainability-related issues (Mohamad Saifudin, 2016) due to the fact that sustainability is a rathera novel topic to Malaysian journalism. It is therefore important to investigate media practitioners' perspectives on their roles in sustainability education and explore the challenges they face in the process of educating the public.

**Media Roles in Sustainability Education and Its Challenges**

The media has been recognized by UNESCO as one of the pivotal stakeholders in sustainability education particularly in reporting and mainstreaming sustainable development to the society due to the power media has as the medium and source of information to the society (Bird, Lutz & Warwick, 2008). Most of us know about environmental issues from the media (Hansen, 2011). Through reporting and coverage, the media are not only able to transfer information but also increase public awareness on sustainability issues like poverty, climate change, biodiversity, conservation and many more (Holt & Barkemeyer, 2012; Ogunjinmi, Onadeko & Ogunjinmi, 2013).

In addition, the media also play a unique role in influencing the public agenda on sustainability issues such as climate change, the Bhopal disaster, the Enron issue  etc. (Holt & Barkemeyer, 2012). Through media reporting, the public is encouraged to debate and take actions on sustainability issues. Yang & Calhoun (2007), for example, in their research on the rise of 'green' public sphere in China, found that the Chinese media have successfully played their public sphere role and made the Chinese State Council suspend the hydropower project on the Nu River in the Yunnan Province in April 2004. The huge debates among the Chinese citizens about that project was cited as the reason behind the suspension of the whole project. Similarly, Wang (2005) also discovered that extensive coverage by the Chinese media on the controversial case of Nanjiang Industrial Park in Sihui has led to the transparency of environmental governance.
It should also be noted that the media play a crucial role as a government watchdog, especially on matters related to sustainability. As the fourth estate, the media is responsible to report and

expose government wrongdoing related to unsustainable development. Nevertheless, the watchdog role can only function effectively within a democratic state where the media are independent, in contrast to authoritarian states.

However, there are massive challenges in the process of educating the society about sustainability issues. One challenge is the subject matter itself - sustainability - which is a heavy, complex (Olsson & Gericke, 2016) and evolving issue to be understood and delivered to the public. According to Asia-Europe Foundation (ASEF) (2013), the term sustainable development has not been widely understood, therefore, it is difficult to convey its meaning and attract the attention of readers, journalists and editors. Therefore, the topic of sustainable development is underdeveloped by the media in their reporting.

Another challenge within the context of Malaysian media industry, is that most journalists have no specialization and need to rotate and cover all topics including fashion, crime, entertainment etc. (Mohamad Saifudin, 2016). Some of the journalists also have no specific background in sustainability studies and limited knowledge on environment, social and economic issues (Mohamad Saifudin, 2016). Therefore, they have limited technical skills in reporting on sustainability related issues.

Further, the Malaysian media are bound to follow the rules of the media ownership system and media laws such as Printing Press Act, Sedition Act and others. This becomes another challenge for the media in the process of educating the public about sustainability issues. For example, Smeltzer (2008) found that the media in Malaysia could only report the government's biotechnology strategy in a positive way and are refrained from being critical towards the government.

Gatekeeper are another challenge. The gatekeeper who is occasionally a group of editors who have the final say in news selection for the public. Some editors even have a bias on certain issues due to organizational factors, news norms, and audience interests (Soroka, 2012). Finally, the most obvious challenge is the readers or the audience. The Malaysian literacy rate is a problem and, in fact, public knowledge regarding sustainability-related issues is minimal. An investigation by Sharifah, Laily & Nurizan (2005) found that Malaysians only have basic knowledge in environmental issues while only very minimal knowledge on scientific issues, therefore, it is very important to educate them on sustainable product consumption.

**Research Methodology**

For the purpose of this study, an email interview was conducted with six selected journalists from two different media organizations, *The Star* and *Utusan Malaysia*. It is worth noting that *The Star* and *Utusan Malaysia* were selected for this study due to their high circulation in daily mainstream newspapers and both media companies are represented in the national language as well as the second language of Malaysia, Malay and English.

Informed consent was taken from all interviewees who were involved in this email interview. The motivation for choosing email interviews instead of face-to-face interviews is due to the long distance between the researcher and the interviewees (Meho, 2006). During data collection

process, the main researcher of this study was in the middle of completing a doctorate degree in Germany and most of the interviewees were in Malaysia. Typically, an email interview also has advantages for the interviewees including the freedom to decide whether they feel comfortable in participating in the study or answering the questions (Wirman, 2012), convenience and comfort (McCoyd & Kerson, 2006), and lack of time pressure.

All these journalists were purposely selected based on three criteria: (1) they work with *The Star* and *Utusan Malaysia*, (2) they have more than one year of working experience, and (3) they have experience writing on sustainability-related issues, particularly the environment, economy and social issues. By using a snowball sampling method, some of the interviewees were also introduced by their colleagues.

In order to investigate the current state of sustainability education among the Malaysian media, six questions were asked to the interviewees of this study: (1) In your opinion, what is sustainability education and how it is different from environmental education? (2) Could you please describe the role of media in sustainability education? (3) Why it is important for the media to educate the public on sustainability issues? (4) Some believe that media only informs and not educate the public about sustainability issues, what is your comment on this? (5) What are the challenges in educating the public about sustainability issues? (6) Do you have any further suggestion or comment about this topic?

For data analysis, qualitative data management software called Maxqda software is used in this study to analyse all the transcripts. By following six phases of thematic analysis approach, the researcher can identify the pattern or themes within the interview data (Braun & Clarke, 2006). A theme is important because it captures something important about the data in relation to the research questions and represents some levels of patterned response or meaning within the data set (Braun & Clarke, 2006, p. 82).

**Results**

The first section of the result will describes the demographic information of all six interviewees as in Table 1 below.

**Table 1 Interviewees Profiles**

| Interviewees ID | X1 | X2 | X3 | Y1 | Y2 | Y3 |
|---|---|---|---|---|---|---|
| **Language** | | | | | | |
| Malay | | | | * | * | * |
| English | * | * | * | | | |
| **Gender** | | | | | | |
| Male | * | | | * | * | |
| Female | | * | * | | | * |
| **Working experience** | | | | | | |
| 1-5 years | * | * | * | | * | |
| 6-10 years | | | | | | |
| 11-15 years | | | | * | | * |
| More than 15 years | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Position** | | | | | | |
| Journalist | * | * | * | | * | |
| Editor | | | | * | | * |
| **Education level** | | | | | | |
| School | | | | | | |
| Bachelor's degree | * | * | * | * | * | * |
| Master's degree | | | | | | |
| Ph.D | | | | | | |
| **Background of study** | | | | | | |
| Communication and journalism | * | | * | | | * |
| Environment | | | | * | | |
| Science | | * | | | * | |
| Other | | | | | | |

All interviewees were labelled using an identification code like X1, X2, X3 for interviewees from *The Star*, and Y1, Y2, Y3 for interviewees from Utusan Malaysia. Demographic information was collected from all interviewees (see Table 1 above). Half of the interviewees used Malay, the national language of Malaysia for the interview and another half used English. The majority of the interviewees (four) were women working as journalists with experience less than six years. Only two interviewees were men. They were working as editors with experience more than 10 years. Interestingly, those with more than 10 years are editors. All interviewees have at least a bachelor's degree and half of them have a background in communication and journalism studies, two have a background in science and only one has a background in environmental studies.

The data analysis for this study will discuss the interviewees' perceptions on: (1) The concept of sustainability education, (2) The roles of Malaysian media in sustainability education, and (3) The challenges that Malaysian media face in reporting on sustainability education. A description of all the emerging themes, sub-themes from the descriptive of data analysis, together with quotations from the interviewees are presented in the following section.

**The Concept of Sustainability Education**

In brief, all of the interviewees understood very well that the concept of sustainability education was different from environmental education. The majority of them stated that environmental education has a more specific focus in educating the public about environmental issues:

> Environmental education I suppose would relate to the fundamentals of environmental systems; like what is an ecosystem? What is a water catchment? Why are mangroves important? Things like that (ID X2).

However, when we discuss the environmental aspect in sustainability education, the majority of the interviewees collectively agreed that environment in sustainability education should teach important values in environmental conservation:

> In my opinion, environment in sustainability education should emphasize on the encouragement of the value of environmental conservation among the society, with public must have the ethic and the discipline on the importance of sustainability in themselves (ID Y1).

On the contrary, most interviewees pointed out that sustainability education has a wider focus than environmental education, encompassing the educational aspect of environment, economic or social, and its goal is for the long run:

> Sustainability education includes examining the feasibility of different strategies, choices we make in terms of our lifestyles, consumption patterns, resource extraction and environmental management; and how viable it is to sustain these practices in the long run (ID X2).

**The Roles of Malaysian Media in Sustainability Education**

The first important role of the media in sustainability education that has been pointed out by the interviewees in this study is to inform the public about the concept of sustainability and sustainable practices via advertorial and daily news articles. The interviewees noted that the media needs to inform the public about the basic concept of sustainability. From the media, public can at least understand the actual concept and meaning of sustainability regardless of their educational background:

> Not everyone is lucky to have an opportunity to study in university, in fact not everyone can study forestry, so it is my responsibility as a journalist with forestry background to inform and highlight this sustainability information to them (public) (ID Y2).

On the other hand, in playing the role as an informer, the interviewees also identified the important role of media in informing the public about the importance of sustainable practices among the society:

> It is our job to inform the public on the gaps in the system, for example, Malaysia produces solar panels in bulk but anyone hardly uses them domestically (ID X3).

The interviewees have highlighted two mediums for informing the public about the concept of sustainability and the importance of a sustainable lifestyle. The first medium is via advertorial section that usually presents the advertiser's products or advertisement related to sustainability.

> One way of explaining about sustainability issues is by using advertorial, weekly, or mostly that this is going on, and you should be doing this (ID X1).

Another medium that was mentioned by an interviewee is regular news articles in which the media organization publishs news on sustainability for public consumption:

One way of informing the public about the concept of sustainability is by publishing more sustainability research in the form that can be easily understood by all of them (ID Y1).

Other than the primary role as an informer, interviewees also pointed out the important role of the media as an educator, especially in educating the public about the commercialization of nature via feature and investigative news stories. In addition, one interviewee observed that Malaysians are more inclined towards money and economic development than protecting the environment, therefore, the media play a vital role on educating the public on how to commercialize the value of nature without destroying them i.e. through sustainable tourism and pharmaceutical:

> The public should be taught that instead of doing deforestation that can harm the environment, they still can earn a lot money from ecotourism by opening the forest to the public, it is twofold where they still earn money from there and at the same time still conserve the nature. Public also can commercialize the forest for pharmaceutical industry like extracting certain leaf for the medicine (ID Y2).

Interviewees identified two ways that journalists can educate the public on sustainability issues. The first is through feature writing as this is more detailed than a news article.

> Feature stories can create a great platform to deliver a more in depth perspective, complete with the context around the news item (ID X2).

Journalists also can play a role in educating the public about sustainability issues via investigative news articles. Investigative news reporting is usually done in a basic series and is more in-depth than common news articles. Some investigative news stories can be in the newspaper for months or even a year. Thus, it can be a great alternative platform for the public to follow news on sustainability:

> Taking the investigation on forest invasion in Cameron Highland for example, this issue has been published in the newspaper since last year and still continues until this day. The investigative stories like this not only allow the audience to follow the stories from the beginning until the end but most importantly from there, we (media) not only can educate the public about the importance of sustainability but also give a lesson to the irresponsible people out there to stop any of their projects that can harm the environment (ID Y1).

According to the interviewees, another indispensible role of the Malaysian media in sustainability education is to serve as a watchdog that not only educates the government or private sector on their wrongdoing, but at the same time exposes current issues related to sustainability to the public so that it can be a lesson to everyone:

> Without doubt, the media should also point out poor practices by the Government agencies and question them (ID X3).

**The Challenges of the Malaysian Media in Sustainability Education**

Some interviewees stated two types of challenges in working with sustainability issues including the fact that these issues are very technical and less attractive. It is interesting to note that sustainability issues are sometimes very complex and use technical language that is somehow quite challenging for journalists to write and deliver to the mass audiences:

> The word sustainability itself is already technical and imagines how we can write news or article on it; without doubt it is very difficult for us to educate them (public) on sustainability topic (ID Y3).

Nevertheless, one interviewee stated that sustainability is also a dry topic that is less attractive to the readers. It is difficult for journalists to write on the subject in an interesting way and it usually ends up with boring and scientific news stories:

> My biggest challenge is on how to write the sustainability reporting in a more attractive way because it usually looks like an academic journal that is written by the researcher or the scientists from the university (ID Y1).

Media organizations themselves were identified by most of the interviewees as being one of the significant challenges to sustainability education due to their role as gatekeeper. Media organizations are often tied down with their profit making objectives, organizational policies, and agendas, and no specialization system in media. Most interviewees agreed that the role of gatekeeper usually held by the editors can be another challenge to journalists in the process of educating the public about sustainability issues. Sometimes, editors have no interest in sustainability or they have a perception that sustainability issues are too difficult for the public to comphrehend. Thus, sustainability articles rarely get published in the newspaper compared to other articles:

> Editorial management dictates what stories get told; often they have circulation numbers in mind and choose the sexiest stories. "Hills being ravaged by bulldozers" is sexy. But a story outlining the often-complex reasons that create systemic incentives that lead to poor environmental conservation is not (ID X2).

Another challenge is the conflict in media organizations between profit and social responsibility. The media worry that readers will not be interested in buying their newspaper and that their daily circulation will drop if they publish articles on sustainability that are often dry and less commercial:

> Sustainability is a less commercialized issue but we the media, as a business entity is very tied to commercialization like circulation and advertisement. Thus, it is unfair to totally depend on media for educating the public on sustainability issues (ID Y1).

It is also worth noting that several media organizations have established policies or agendas for their organization. One interviewee from *Utusan Malaysia* stated that *Utusan Malaysia*, for instance, is established for the purpose of protecting the rights of the Malays, Malaysian

constitution, Islam and the King. These missions are clearly more inclined towards political orientation and whether they like it or not, *Utusan Malaysia* has given top priority to these agenda in their publication. Therefore, it is difficult for their journalists to get a space for publishing sustainability issues as it is not on the priority list unless these sustainability issues are related to politics e.g. the government launches an incinerator:

> I think the sustainability issues, particularly environmental stories are more published in *The Star* than our media due to our policy that is more to the Malays, constitution, national language and so on and so forth (ID Y3).

The nature of journalists' work in media organization in Malaysia is more on a rotation basis rather than focusing on a particular field of specialization. Media companies encourage journalists to work on all issues, rather than focusing on certain issues like sustainability, so that they become more well rounded. Sometimes, this rotation system also becomes a challenge for journalists who have deeper interest in sustainability-related issues:

> We do not have any specialization, it is not always that you can cover one specific story like environment; you have to do other news as well.  The write up on sustainability is more to the journalist initiative (ID Y2).

Another important remark by the interviewee is that Malaysian readers are more interested in other news like entertainment or politics compared to environment or sustainability. Therefore, the media have no choice but to follow the demand of the readers' choice because they want to sell their newspapers:

> Another challenge for me is how to change the readers' perception to be attracted more on sustainability issues than other sensational issues (ID Y1).

**Discussion**

This study shows that most of the interviewees, regardless of their working experience, position in organization, educational background, and gender, have a good understanding of the concept of sustainability education. The majority of the interviewees were able to distinguish between the concept of sustainability and environmental education, which is in line with the discussion on the connection and difference between sustainability, science and environmental education as illustrated in Figure 1. Indeed, unlike environmental education that is more specifically about educating the public about ecological or environmental matters (McLean, 2013), sustainability education has wider focus encompassing education about the environment, the economy, and social justice issues (Wang et al., 2012). Most importantly, the goal of sustainability education is for the long-term maintenance for our future generations (Meng, 2015).

In addition, the majority of the interviewees also realized the important role of media as a social actor in educating the public on sustainability issues. In line with UNESCO, most of the interviewees agreed that the media is a source of information that play a vital role in reporting and mainstreaming basic sustainable development information to the society. Via reporting and coverage such as through advertorial and news article, media are not only able to transfer

information, but also increase public awareness about sustainability (Holt & Barkemeyer, 2012). Media should also inform the public about the importance of sustainable daily lifestyle practices like the use of sustainable solar energy, hybrid cars, etc.

The next key role of the media is to educate the public on sustainability issues. An educator's role is evidently different from an informer's role. Where appropriate, the objective of the educator role is not only to make the public understand sustainability issues but also far from that whereby it works towards changing the public's attitude and behaviour from negative to positive. Taking the environmental aspect in sustainability education, for instance, the goal of educating the public about environmental issues is not only to make them informed about the environment but, most importantly, to address the massive environmental degradation (Halder, 2012) through action. Of course, to educate the public on sustainability issues, journalists need to write longer stories with more detail using more spaces in the newspaper, like a feature section or investigative stories' section. Most of the interviewees also realized their significant role as a watchdog to the government and private companies. As watchdog, they need to provide checks and balances, to keep an eye on the government or private company's sustainability work, and most importantly, to let them know if they have made a mistake.

Additionally, there are three common challenges in sustainability education as explained by all the interviewees including the challenge from sustainability issue itself, challenge from the organization, and challenge from the readers. In general, the term sustainable development is not widely understood, therefore, it is difficult to convey the meaning and understanding, and attract readers, journalists and editors (ASEF, 2013). Sustainability issues are also dry and less attractive compared to other issues like entertainment. However, this should not be a challenge for the media to communicate about sustainability issues given that other issues, like economics and politics also have technical terms, and are covered routinely. To overcome the problem of technical sustainability terms, it is highly recommended that journalists use communication tools like information graphics to deliver difficult and technical issues concisely to an audience (Smiciklas, 2012). In fact, journalists should consider using more pictures when they explain technical sustainability terms to the audiences as visual images are effective tools in explaining complex and difficult environmental issues as well as making it interesting and easier to remember (Curtis, 2011).

The biggest challenges faced by the interviewees in sustainability education are mostly from media organizations. Journalists have to face the gatekeepers who usually have certain biases on issues due to organizational factors, news norms, and perceptions about audience interest (Soroka, 2012). Media organizations need to make profits thus sustainability issues, which are not popular, only occasionally get published in the newspaper. The policy and agenda of certain media organizations, like Utusan Malaysia, that is more politically inclined also make it difficult for journalists to cover sustainability-related issues because it is not a priority of the company. The rotation system prevents journalists from becoming expert on the issues and gives them fewer opportunities to write sustainability issues even though they are interested in the subject. Considering these challenges posed by the media organizations, it would be good if the media organizations could give more support to journalists in Malaysia, particularly offering more space and freedom to freely communicate about sustainability issues to the public without bias or hesitation. Finally, the readers—Malaysian citizens—are more interested in other light issues

like entertainment, thus making it difficult for journalists to write more on sustainability issue as the demand is very low. To overcome this problem, the media should try to make the sustainability issues as interesting the entertaintment news by using more colorful images that grab readers' attention and avoiding long and technical passages so readers do not disengage and stop reading (Koh, 2004). In fact, since the Malaysian society tends to favour entertainment over sustainability news, the media can also incorporate a combination of entertaintment and sustainability information like the involvement of celebrities in sustainability issues. This is proven by past studies like Smith & Joffe (2009) who discovered that the appearance of celebrities, for example, are important in the process of changing public behaviour towards a more sustainable or green lifestyle.

## Conclusion

Overall, this study has discussed in detail three main components of media in sustainability education including the concept of sustainability education, the role of media in sustainability education and the challenges in the media itself in sustainability education in Malaysia. From the findings of this study, it is evident that the Malaysian media have made a contribution to sustainability education in Malaysia and it not a myth as claimed by certain groups of people. We hope that the findings of this study have given a clearer picture to media practitioners in Malaysia and Asia at large on how they can contribute by playing their role in sustainability education in the future. The print media should not only focus on reporting or informing but also should take part in an educative and watchdog role. We hope that all the challenges discussed in this study have provided better direction to media practitioners and media organizations on the challenges to overcome in order to improve the quality of sustainability education in the print media. Finally, we hope that future research would consider expanding the number of interviewees and media organizations.

## Acknowledgements

## References

Asia-Europe Foundation (ASEF). (2013). Sustainable development reporting for journalists. Retrieved from:
http://www.asef.org/images/stories/publications/ebooks/2014_ASEF_Media_Handbook_Sustainable_Development_Reporting.pdf.

Bañon Gomis, A. J., Guillén Parra, M., Hoffman, W. M., & Mcnulty, R. E. (2010). Rethinking the concept of sustainability. *Business and Society Review, 116*(2), 171–191.

Bird, E., Lutz, R., & Warwick, C. (2008). Media as partners in education forsustainable development: A Training and Resource Kit. Retrieved from:
http://unesdoc.unesco.org/images/0015/001587/158787E.pdf.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology (p. 82). *Qualitative Research in Psychology, 3,* 77–101.

Curtis, D. J. (2011). Using the arts to raise awareness and communicate environmental information in the extension context. *The Journal of Agricultural Education and Extension, 17*(2), 181–194.

Daniel, E. G. S. (2013). Asia Pacific science education in a knowledge society. *Asia Pacific Journal of Education, 33*(3), 170–182.

Gadotti, M. (2007). Education for Sustainable Development. What we need to learn to save the planet? Retrieved from:
http://earthcharter.org/invent/images/uploads/Education%20for%20Sustainable%20Development.pdf

Halder, S. (2012). An appraisal of environmental education in higher school education system: A case study of North Bengal, India. *International Journal of Environmental Sciences, 2*(4), 2223–2233

Hansen, A. (2011). Communication, media and environment: Towards reconnecting research on the production, content and social implications of environmental communication. *The International Communication Gazette, 73*(1-2), 7–25.

Holt, D., Barkemeyer, R. (2012) Media coverage of sustainable development issues-attention cycles or punctuated equilibrium? *Sustain Dev, 20,* 1–17.

Karpudewan, M., Zurida, H. I., & Norita, M. (2011). Greening a chemistry teaching methods course at the school of educational studies, Universiti Sains Malaysia. *Journal of Education for Sustainable Development,* 5(2), 197–214.

Koh, A. (2004). Newspaper literacy: An investigation of how Singaporean students read the Straits Times. *English Teaching: Practice and Critique, 3*(3), 43–60.

Lee, L. (2011). Where in the world of sustainability education is US Geography? *Journal of Geography in Higher Education, 35*(2), 245–263.

McCoyd, J. L., & Kerson, T. S. (2006). Conducting intensive interviews using email: A serendipitous comparative opportunity. *Qualitative Social Work, 5,* 389–406.

McLean, S. (2013). The whiteness of green: Racialization and environmental education. *The Canadian Geographer. 57*(3), 354–362.

Meho, L. I. (2006). E-mail interviewing in qualitative research: A methodologic discussion. *Journal of the American Society for Information Science and Technology, 57,* 1284–1295.

Meng, J. (2015). Sustainability: A framework of typology based on efficiency and effectiveness. *Journal of Macromarketing, 35*(1), 84–98.

Mohamad Saifudin. M. S. (2016). *Environmental communication among the media and environmental non-governmental organisations (ENGOs) in Malaysia: A roller coaster ride? (doctoral dissertation).* Leuphana University of Lüneburg, Germany.

Navarro-Perez, M., & Tidball, K. G. (2012). Challenges of biodiversity education: A review of education strategies for biodiversity education. *International Electronic Journal of Environmental Education, 2*(1), 1–30.

Ngaka, W., Openjuru, G., Mazur, R. E. (2012). Exploring formal and non-formal education practices for integrated and diverse learning environments in Uganda. The *International Journal of Diversity in Organizations, Communities and Nations, 11*(6), 109–121.

Noranida Mokthsim, & Khairulmaini Osman Salleh. (2014). Malaysia's efforts toward achieving a sustainable development: Issues, challenges and prospects. *Procedia- Social and Behavioral Sciences. 120,* 299–307

Ogunjinmi, A. A., Onadeko, S. A. & Ogunjinmi, K. O. (2013). Media coverage of nature conservation and protection in Nigeria National Parks. *International Journal of Biodiversity and Conservation, 5*(10), 687–695.

Olsson, D., & Gericke, N. (2016). The adolescent dip in students' sustainability consciousness–implications for education for sustainable development. *The Journal of Environmental Education, 47*(1), 35–51.

Ors, F. (2012). Environmental education and the role of media in environmental education in Turkey. *Procedia-Social and Behavioral Sciences, 46,* 1339–1342.

Osborne, J. (2007). Science education for the twenty first century. *Eurasia Journal of Mathematics, Science & Technology Education, 3*(3), 173–184.

Sharifah, A. H., Laily, P., & Nurizan, Y. (2005). Towards sustainable consumption: An examination of environmental knowledge among Malaysians. *International Journal of Consumers Studies, 29*(5), 426–436.

Sherman, J. D. B., & Burns, H. L. (2015). 'Radically different learning': Implementing sustainability pedagogy in a university peer mentor program. *Teaching in Higher Education, 20*(3), 231–243.

Smeltzer, S. (2008). Biotechnology, the environment, and alternative media in Malaysia. *Canadian Journal of Communication, 33*(1), 5–20.

Smiciklas, M. (2012). *The power of infographics: Using pictures to communicate and connect with your audiences.* Indianapolis, IN: Que Biz-Tech.

Smith, N. W., & Joffe, H. (2009). Climate change in the British press: The role of the visual. *Journal of Risk Research, 12*(5), 647–663.

Soroka, S. N. (2012). The gatekeeping function: Distributions of information in media and the real world. *Journal of Politics, 74*(2), 514–528.

The World Bank. (2015). Malaysia overview. Retrieved from http://www.worldbank.org/en/country/malaysia/overview.

Tidball, K. G., & Krasny, M. E. (2011). Toward an ecology of environmental education and learning. *Ecosphere, 2*(2), 1–17.

UNESCO. (2015). Media as partners in education for sustainable development: A training and resource kit. Retrieved from http://unesdoc.unesco.org/images/0015/001587/158787E.pdf.

Wang, Q. J. (2005). Transparency in the grey box of China's environmental governance: A case study of print media coverage of an environmental controversy from the Pearl River Delta Region. *Journal of Environment & Development, 14*(2), 278–312.

Wang, X., Hawkins, C. V., Lebredo, N., & Berman. E. (2012). Capacity to sustain sustainability: A study of U.S. cities. *Public Administration Review, 72*(6), 841–853.

World Commission for Environment and Development WCED. (1987). *Our Common Future (p. 43).* UK: Oxford University Press.

Wirman, H. (2012). Email interviews in player research: Case of the sims 2 skinners. *Westminster Papers of Communication and Culture, 9,* 153–170.

Yang, G., & Calhoun, C. (2007). Media, civil society, and the rise of a green public sphere in China. *China Information, XXI*(2) 211–223.