





FRAMING SUSTAINABLE ENERGY: A COMPARATIVE ANALYSIS OF MALAY AND ENGLISH NEWSPAPERS IN MALAYSIA



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ABSTRACT

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This study aims to examine how mainstream newspapers in Malaysia frame sustainable energy. Framing is the perspective or the angle taken by newspapers when writing about a news story. How newspapers frame sustainable energy is a very important indication of how the issue is perceived by the public mostly because the media is where most people get their news and information regarding environmental and sustainability issues. A deductive, quantitative methodological approach was used to identify dominant frames and news sources in articles published in four Malaysian newspapers: News Straits Times, The Star, Berita Harian and Harian Metro between January 2018 and September 2019. Media framing theory was employed as the framework for analysis. The findings suggest that while the English and Malay newspapers shared some similarities in the way they covered sustainable energy, it is the English newspapers that are more proactive in driving the readers to be more engaged with the issue. In addition, this study extends our understanding of the contextual conditions that enable and limit journalists when reporting environmental and sustainability issues.

Contribution/ Originality: Findings from this study contributes to the existing literature on the impact of media on the public's understanding and engagement with sustainability issues while extending our understanding of the contextual conditions that enable and limit journalists when reporting about environmental and sustainability issues.

1. INTRODUCTION

Sustainable Development Goals (SDGs) is an initiative undertaken by the United Nations in 2015 to address series of global issues such as poverty issues, gender inequality issues, environmental pollutions, affordable healthcare, famine and many other important issues. Through its 17 main goals, this initiative is expected to enhance the quality of life that encompasses human life and the survival of the ecosystem. Obviously, the SDGs are essential for the attention and support of all global citizens as they are not for the benefit of certain individuals and parties, but it is for the good of the whole world.

Looking at the importance of this initiative, it is logical that we need to understand how these great ideas can be passed on to the public. These Sustainable Developments Goals will be difficult to achieve if they are not well explained and disseminated to the society because as mentioned earlier, it requires the support of all parties. The

media has a powerful role to potentially engage the general public to better understand the SDGs and their implications (Lyytimäki, 2018). Thus, it becomes important to investigate how information about the SDGs is disseminated through the media. We need to ask questions such as how is this effort is discussed and reported in the mass media? And how frequently does the media discuss or report about it?

This study will focus more specifically on one of the Sustainable Development Goals, that is SDG 7: Clean and Affordable Energy where one of its major theme and objective is to spread the use of 'Sustainable Energy'. Sustainable energy generally refers to energy that has sustainable elements and can be used for survival today without risking the future. According to Prasad, Sheetal, Venkatramanan, Kumar, and Kannoja (2019) sustainable energy can be generated through various natural sources such as solar power, wind power, small hydropower, biofuels and bioenergy. In addition, the development and adoption of sustainable energy technologies are important factors in climate change mitigation (Wonneberger, Meijers, & Schuck, 2020). The role of news media, media frames and news media actors in this process is thought to be important. Numerous studies having demonstrated that news media reflect and influence agendas and attitudes (Mohamed & Idid, 2019). Research also suggests that news media play a key role in the diffusion of new technologies into mainstream society (Nuortimo, Härkönen, & Karvonen, 2018; Wok & Mohamed, 2017). When writing news articles, journalists contextualize global and general issues such as sustainable energy to provide local meaning and relevance for their readership. Based on these assumptions, this paper will investigate how the media has been reporting about sustainable energy. More specifically, this study will look at how the Malaysian newspapers frame sustainable energy by asking the research questions below:

RQ 1: How much do Malaysian newspapers cover about 'sustainable energy'?

RQ 2: What are the news sources used by the newspapers when covering about 'sustainable energy'?

RQ 3: What are the types of coverage used by the newspapers when covering about 'sustainable energy'?

RQ 4: How does Malaysian newspapers frame news on 'sustainable energy'?

2. LITERATURE REVIEW

The present study focuses on the framing of news reports, where framing is conceived as the central organizing principle or storyline. Framing of news stories is the result of a struggle for power, legitimacy and hegemony by various social actors. The coverage of energy issues in the media is shaped by these struggles as well as by structural and institutional influences in a given country. Sustainable energy issues are complex and involve political, technical, scientific, economic, environmental and civil society aspects (Wonneberger et al., 2020). The decisions made by journalists about which specific problems are given attention in the media and how these issues are framed (in terms of causes, consequences and solutions) vary largely as a result of interactions between differently empowered actors in politics, science, industry and civil society.

According to Lyytimäki (2018) media coverage on sustainable energy in newspapers around the world is still at an insufficient level in many aspects. In some cases, coverage on sustainable energy was not holistic enough as they tend to focus only on specific group of people and area. For example, a study conducted by Djerf-Pierre, Cokley, and Kuchel (2016) which looks at news framing in two newspapers from two different countries, namely Sweden and Australia, found that these two newspapers have significant similarities in the ways they report and frame sustainable energy. Both newspapers emphasized the economic frame that related mostly to the elite group while frames that were more relevant to the environment and the general public such as the misappropriation of energy use by corporations were not discussed.

Similar findings can be seen in a study conducted by Janoušková, Hák, Nečas, and Moldan (2019). In their research which employed qualitative content analysis, they analysed some of the world's leading newspapers such as The Wall Street Journal, Dow Jones Newswires, The New York Times, The Sydney Morning Herald and found most newspapers focused only on broad and conventional themes such as 'Climate change' and 'Sustainable

Development Goals' whereas they did not pay much attention to other themes such as "Hunger incidence" and "Inequalities". These two findings prove that the media coverage failed to address all parties and tend to be biased toward certain sectors.

In more specific studies that looked at media framing from the perspective of a single country, the results are inconsistent and incomprehensive. For example, in a media framing study by [Stauffacher, Muggli, Scolobig, and Moser \(2015\)](#) on the topic of geothermal energy topics in mass media in Switzerland, they found that newspaper reports focused more on negative events than positive events. This has influenced the public thinking to focus on the negative aspects of geothermal energy than the positive side. A study conducted by [Sharafa and Nik \(2018\)](#) on news reporting in 6 English-language online newspapers in Malaysia on Sustainable Development Goals found that news reporting in most of the newspapers were insufficient in terms of coverage of the issue and the strength of the news sources. The alternative newspapers are seen to be more independent and transparent in their news reporting than in the major newspapers. This type of reporting might prevent the public from knowing the truth and reality of Sustainable Development Goals. Both studies show that media reporting in certain countries are still biased, restricted and incompetent.

The mass media framing of sustainable energy is influenced by several factors. For example, in a study by [Reetz, Arlt, Wolling, and Bräuer \(2019\)](#) that employed a quantitative content analysis to study media framing of sustainable energy in 11 different countries, found that several factors may influence the way media framing is conducted in each country. In this study, they mentioned some main factors and one of them is the level of natural resources. For example, countries with limited natural resources of energy tend to portray sustainable energy in a positive framing, as they believed sustainable energy could be a great solution for the society. However, for countries with well-equipped sustainable energy technologies such as the United States, the media tend to frame sustainable energy through critical frames and elements such as critical environmental and social evaluation framing.

[Govindaraju, Sahadevan, and Tan \(2019\)](#) supported the idea that developing countries tend to positively cover about sustainable energy. Their study on several online newspapers in Malaysia found that the press report focused on limited number of issues. The most popular is on biomass because it is a significant source of economy for Malaysia that has a rich background in oil palm biomass. This relates to the findings of a previous study by [Reetz et al. \(2019\)](#) that claimed media framing is influenced by the structural features of a particular country.

Based on the literature review, it can be claimed that research studies on the coverage of sustainable energy in mass media is still inadequate. Most of the media content is not holistic where only certain issues, frames and actors are given priority in media coverage.

3. THEORETICAL FRAMEWORK

Issues typically require mass media coverage before they can become part of the public agenda ([Lyytimäki, 2018](#)). Newspaper coverage of sustainable energy generates and frames meaning and engagement through discourses within and across media, and among audiences.

While media coverage seems to be an essential tool for raising public awareness, even large volumes of coverage do not necessarily promote public support for action on an issue. The issue of sustainable energy has been a case in point—several decades of media coverage of the expected dramatic consequences of a changing climate have engendered relatively little action to address the problem. Indeed, this disconnect between news coverage and public action casts doubt upon a notion of news coverage as "collections" of texts and images that are received and digested by the public; rather, its content is a mediation of a social relationship, co-constructed by creators and consumers and their norms and cultural perspectives ([Nuortimo et al., 2018](#)).

Framing theory [Entman \(1993\)](#) provides an appealing explanation for one way in which media coverage can influence public attitudes. To date, there are several definitions of this theory that have been used by scholars in

their studies. Griffin (2003) describes framing as the process of calling attention to some aspects of reality while obscuring others, which might lead to different reactions; and Scheufele and Tewksbury (2007) refer to framing as the selection of a restricted number of thematically related attributes for inclusion in the media agenda when a particular object is discussed. Entman (1993) identified two kinds of frames: media frames, which concern how content is constructed and represented by the creator, and audience frames, which concern individuals' mental maps or schemas associated with exposure to that content. Framing provides an essential link between new information and the audiences' existing knowledge and ideas. Framing exerts influence through complex interactions among audience characteristics, message features, and resonance with existing cognitions, as well as other situational and contextual factors. As such, it has been used extensively in studies about policy communication on issues such as SDGs (Govindaraju et al., 2019) sustainable energy (Haigh, 2010) and climate change (Rebich-Hespanha et al., 2015).

This study draw upon Entman's framing as the theoretical framework because it relates to the main purpose of this study, which is to see how the media portrays sustainable energy. Since a theory can be used to make sense and answering certain questions as McQuail (2004) puts it, we believe the framing theory can help us to identify and understand how Malaysian newspapers report and frame sustainable energy.

4. METHODOLOGY

To achieve the purpose of this study, we have chosen to use the content analysis as our method to generate data. This method is selected because of its systematic traits in analysing documents as described by White and Marsh (2006) and this means it is relevant to this study given that our data source is media contents. In addition, Yakim, Mohamed, and Manan (2019) stated that content analysis has also regularly been used in the field of communication studies, mainly studies on media content such as newspapers contents. This suggests the results of this study will be replicable in nature and can be used as a reference for future similar studies.

As content analysis can be both quantitative and qualitative, quantitative content analysis was employed as the research method for this study. The articles used for the study were drawn from 1 January 2019 to 30 September 2019, covering a period of 21 months to provide enough content to identify reporting trends. The unit of analysis was all articles available in the newspapers' online archive that had keywords such as 'sustainable energy' 'sustainable energy' 'new energy' 'sustainable resource'. For the Malay newspapers the keywords included are the Malay terms used to represent sustainable energy such as 'tenaga mampan' 'tenaga yang diperbaharui' 'tenaga bijak pakai' in its headline and content.

4.1. Sampling and the Selected Newspapers

Non-probability sampling technique was used in selecting the newspapers for this study. Non-probability sampling enables the researchers to set the specific criteria relevant to the aim of the study (Etikan & Bala, 2017). Therefore, it is not an open and random sampling procedure. There are several fractions under this sampling technique and one of them is purposive sampling. Purposive sampling is a sampling technique based on a researcher's expertise in evaluating samples that are expected to meet the needs of the study (Etikan & Bala, 2017). In our case, we believe that the main Malay and English online newspapers in Malaysia can help us to achieve the objectives of this study. The selection of the newspapers is based on three characteristics; the predetermined keywords; the largest number of followers on social media as well as the two languages used are the two main languages in Malaysia. Therefore, we believe that the selection of these criteria is enough to reflect the situation in Malaysia.

Hence, we have selected 2 main Malay language online newspapers namely *Harian Metro* (Malay) and *Berita Harian* (Malay) and 2 main English language newspapers namely, *The Star* (English) and *the New Straits Times* (English). The descriptions of the selected newspapers are described in Table 1.

Table-1. Descriptions of the sampled newspapers.

Newspaper	Circulation	Online subscribers	Years published
Berita Harian	63,471	5.2 million	1957
The Star	140,000	4 million	2006
Harian Metro	151,623	1 million	1971
News Straits Times	30,929	720,000	1974

4.2. Coding Procedures

The framing of sustainable energy by the selected Malaysian newspapers was examined using three different dimensions: 1) Type of coverage, 2) news sources, and 3) news frames. In addition, the extent of coverage was studied from two angles: 1) number of news items, and 2) type of news items. Conventionally, there are two possible approaches to analysing frames in the news: inductive and deductive (Matthes & Kohring, 2008; Semetko & Valkenburg, 2000). The inductive approach involves analysing a news story with an open mind to unravel the full array of possible frames, beginning with very loosely defined preconceptions of these themes. This approach can detect all the possible ways an issue can be framed, but it is labour-intensive, often based on small samples, and can be difficult to replicate. A deductive approach involves predefining certain frames as content analytic variables to verify the extent to which these frames occur in the news. This approach makes it necessary for the researcher to have a clear idea of the likely kinds of frames because frames that are not defined a priori may be overlooked. This approach can be replicated easily, can cope with large samples, and can easily detect differences in framing between media (e.g. television vs press) and within media (Semetko & Valkenburg, 2000).

Table-2. Operational definitions for coding – news sources.

News source	Definition
Research company/ NGOs	Private companies, organizations, institutions
Government agencies	Official governmental institutions such as the Ministry of Health, Public Hospitals, ministers and government health operators
Journalist/media company	The newspaper journalist's own coverage/ reporting
Research-based entities/university	Institutions or organizations that do research and provide scientific evidences regarding the issue
Private companies	Profit-making businesses that may sponsor a news or organize events relating to the issue
News agency	Other media institutions such as international news agencies like Reuters

Table-3. Operational definitions for coding – types of news.

News type	Definition
Editorial	An editorial is a special coverage written about the issue where the news size is relatively big
News story	A report by the journalist describing occurrences or incidents related to vaccination
Event coverage	A coverage on an external event related to sustainable energy. Such as the officiating of a new policy or a promoting an awareness campaign
Letter from reader	Letter or opinion piece written by members of the public
Issue coverage	Special news article that is based on unique cases
Sponsored news	Advertorials, Sponsored or paid articles

Similarly, Wimmer and Dominick (2014) recommended two ways in establishing coding categories for content analysis. The first is known as priori coding, where the researcher establishes categories before data are collected, based on some theoretical or conceptual rational. The second method is called emergent coding, where the researcher establishes categories after a preliminary examination of the data. This study employed the deductive or priori coding approach for both news sources and news frames. The list of sources and frames was derived from literature reviews and examination of local reporting of the sustainable energy.

To answer the research questions, RQ2, RQ3 and RQ4 were measured in terms of three coding categories that include News Sources, Types of News and News Frames. Each of the categories is then operationalized accordingly. The tables below list the operational definitions of each coding category.

Table-4. Operational definitions for coding – news frames.

News frames	Definition
Informational	Articles that provides objective and factual information without asserting specifics opinion or sentiment
Product promotion	Articles that promote the commercial use of specific technology, product and application
Issue focused	Articles that focuses on specific incidents, crisis and discusses the subsequent implications
Campaign/Call for action	Articles that projects clear sentiments and proposes action on the part of the readers
Promote government initiative	Articles that support, highlight and promote governmental calls and initiatives

5. DATA FINDINGS

The study identified 168 news articles related to sustainable energy from the four samples newspapers. Content analysis on these articles informed the findings to the research questions. Table 5 below describes the how much the Malaysian newspapers cover about sustainable energy.

RQ 1: How much do Malaysian newspapers cover about 'sustainable energy'?

Table-5. Amount of coverage given by the selected newspapers.

Newspaper	Amount	Percentages
NST	54	32.14%
Berita Harian	32	19.04%
Harian Metro	19	11.30%
TheStar	63	37.50%
Total	168	100%

Through online search of the newspapers' archives using operational keywords such as 'sustainable energy' 'renewable energy' 'new energy' 'sustainable resource', the study collected and analysed 168 news articles. Out of this total number, the two English newspapers reached wrote more about sustainable energy compared to the Malay newspapers. The Star newspaper had the highest coverage that is 37.50% of the total articles, followed by News Straits Times, which covered 32.14% of all 168 articles. Meanwhile, Berita Harian came third with 19.04% and Harian Metro wrote the least about sustainable energy that is at 11.30%. Apparently, the total combined percentages for English newspapers composing of 69.64% more than doubles of the total percentage of Malay newspapers coverage of only 30.34%.

However, there are several potential factors that may contribute to this significant gap in coverage, such as the editorial board decisions of a company as found in the study of Sharafa and Nik (2018). Sharafa and Nik (2018) explained that newspaper editors of Malaysian newspapers often do not find the commercial as well as journalistic value in covering environmental issues such as sustainable energy. Another potential contributing factor is the nature of a tabloid. If we look at the background of all the selected newspapers, we will find that except for Harian Metro, all of the newspapers were once circulated in "broadsheet" form but have now adopted the tabloid form. Tabloids are by nature and historically known as newspapers that do not focus on hard news like policy, economic and so on. Tabloids are better known as newspapers that focus on sensational issues and they are normally guided by the demands of society as explained by Chakraborty, Sarkar, Mrigen, and Ganguly (2017). Therefore, this may lead to the issue of coverage and content selection for Harian Metro whose percentage of coverage is the lowest amongst all. Apart from that, in Malaysian context, English newspapers are known for their concern on

environmental issue more than the Malay newspapers as argued by Ibrahim (2009). This is due to the reader demographic of the English newspapers that are tilted towards the more educated and affluent section of the population. Environmental issues are often considered less significant and relevant to the bottom sections of the society where issues of economy and local politics appear to be more present in everyday life.

RQ 2: What are the news sources used by the newspapers when covering about 'sustainable energy'?

The study identified that when the media covers about sustainable energy, 6 main sources are often quoted. The sources of news are Research Company, Government Agencies, Journalists, University Research, Private Companies and News Agency (Refer Table 2 for the operational definitions of each source).

Table-6. The source of news used by the selected newspapers.

Source of news	Research company	Government agencies	Journalists	University research	Private companies	News agency	Total
NST	10 (18.52%)	22 (40.74%)	10 (18.52%)	4 (7.41%)	8 (14.81%)	0 (0%)	54 (100%)
Berita Harian	0 (0%)	9 (28.12%)	10 (31.25%)	4 (12.5%)	4 (12.5%)	5 (15.63%)	32 (100%)
Harian Metro	2 (10.53%)	7 (36.84%)	8 (42.11%)	1 (5.26%)	1 (5.26%)	0 (0%)	19 (100%)
TheStar	0 (0%)	18 (28.57%)	13 (20.63%)	0 (0%)	30 (47.62%)	2 (3.18%)	63 (100%)
Total	12 (7.14%)	56 (33.33%)	41 (24.40%)	9 (5.36%)	43 (25.60%)	7 (4.17%)	168 (100%)

Data in Table 6 describes the sources that inform the news content is one of the most important elements in the investigation of newspaper coverage. Credible and accurate references will increase the trustworthiness of media contents and may help the media from dangerously disseminating false information to the public. Through the analysis, it was found that English newspapers show different direction from Malay newspapers in terms of the highest percentage by type of sources. Even between the two English newspapers, significant differences can be found. For example, the main source of information for News Straits Times is government agencies such as the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) and its subsidiary, Unit Peneraju Agenda Bumiputera (TERAJU) which is made up 40.74% of their total sources, while The Star's main information source is private companies such as Permaisuri Industries Bhd and Malakoff Corp Bhd which is comprise of 47.62% of their total sources. This differences clearly suggest two different orientations in seeking information related to sustainable energy where News Strait Times is inclined to seek for credible information on sustainable energy, while The Star tend to prioritize commercial type of information that related to sustainable energy.

In contrast, for the lowest percentage of sources, both English newspapers show some similarity. News Straits Times and TheStar showed less interest in getting their information from news agencies since there was no record of news retrieved from news agencies this type of source represent the lowest combined percentage which composed of less than two percent of their total percentage of source. Perhaps, it is related to the fact that both newspapers depend steadily on their own journalist as source of information. Similarly, for The Star, there is no sign of interest in getting information from research companies and university research.

However, when looking at the highest combined percentage for both English newspapers, we found that the highest total percentage is the government agencies that composed of 34.19% of their total combined sources and followed by the private companies that composed of 32.48% of their total combined sources. To conclude, these two dominant sources suggest that English newspapers are keen to seek credible and commercial type of information even though they differ at the highest percentage of sources. Moreover, they also tend to be independent as they rely more on their internal sources to produce content than to rely on news agencies. Relying on news agency will

make them have less authority in creating their own content. In other words, English newspapers tend to look for credible, commercial and authoritative sources.

Meanwhile, for both Malay language newspapers, there is no big difference found when it comes to the main sources of information. Both newspapers have the same main sources of information, though they differ in percentage. This can be seen when these two newspapers shared two major sources, which is government agencies and journalist. For the highest percentage of source for these newspapers are the journalists. This meant that when writing about sustainable energy the journalists did not quote any sources and was writing based on their own knowledge and understanding. Journalists wrote 31.25% of the news on sustainable energy in Berita Harian 42.11% of the news on Harian Metro. Meanwhile, both Berita Harian and Harian Metro employed government agencies such as Institut Tadbiran Awam Negara (INTAN) and SIRIM Berhad as their second highest source composing of 28.12% and 36.84% of their total sources respectively.

Harian Metro did not source any news from the news agencies while Berita Harian only sourced five news articles from news agencies. This implied that both papers did not find the importance of buying news out sustainable energy. Both Malay papers also scarcely (3.92%) sourced news from research companies. It could be presumed that the Malay newspapers were not inclined to get progressive and up-to-date information normally provided by research companies. Obviously, this combined percentage of both Malay newspapers showed that they prioritize straightforward and authoritative but not necessarily progressive news about sustainable energy.

In conclusion, it clearly shows that English newspapers and Malay newspapers have slightly different orientation when it comes to the source of information or news. The English newspapers tend to be more liberal in their sourcing of news whereby they don't rely entirely on journalists and the government agencies. They did source news from university research and private companies indicating that the information they shared are varied and more intriguing. The Malay newspapers on the other hand seem to be more rigid in terms that they were mostly dependent on government agencies and their own journalists hence limiting the ideas and perspectives revolving sustainable energy. However, on the whole, the government agencies are the biggest contributor of sustainable energy news for all newspapers which composed of 33.33% of their total sources (164 sources) and this shows that Malaysian main newspapers still depend heavily on authoritative sources and information especially when it comes to technology and scientific related articles. This also implies that when it comes to sustainable energy, it is the government that are driving the public perception. While this showed that the Malaysian government is proactive in their attempt to promote the use of sustainable energy, it also indicates that there is a lack of interest and participation from non-governmental agencies and institutions in the sustainable energy discourse. It could also be that the newspapers are not seriously highlighting the contributions and the concerns of sustainable energy or environmental groups.

RQ 3: What are the types of coverage used by the newspapers when covering about 'sustainable energy'?

The types of coverage refer to the nature of the content given to the issue. The study found 6 types of coverage including editorial, news, event coverage, letters from readers, issue coverage and sponsored news (refer [Table 3](#) for operational definitions).

Findings in [Table 7](#) shows that the highest percentage of coverage for both English newspapers was news because 63.76% of the coverage in The Star and 35.09% of coverage in the News Straits Time were news-based. This shows that half (50.79%) of the coverage in both newspapers were just news reporting that did not provide much weight or arguments to the issues of sustainable energy. Apart from that, event coverage were also high in percentage for both newspapers (16.67%) which means that the newspapers were only covering about events related to sustainable energy without necessarily discussing the topic from critical perspectives such as the impact of the issue on society.

However, both English newspapers have tried to balance out this situation by offering more significant forms of coverage through editorials, which composed of 7.14% of their total percentage, and issue coverage 13.49% of

their total percentage. Through these types of coverage, sustainable energy was discussed thoroughly and calls for actions were put forth. The least type of coverage used by the English newspapers was sponsored news (4.76%) that meant that both papers did not get significant commercial return in writing about sustainable energy.

Table-7. Type of news coverage given by the selected newspapers.

Types of coverage	Editorial	News	Event Coverage	Letter from readers	Issue Coverage	Sponsored News	Total
NST	7 (12.28%)	20 (35.09%)	10 (17.54%)	5 (8.77%)	13 (22.81%)	2 (3.51%)	57 (100%)
Berita Harian	6 (15.38%)	9 (23.08%)	11 (28.21%)	3 (7.69%)	5 (12.82%)	5 (12.82%)	39 (100%)
Harian Metro	0 (0%)	13 (46.43%)	7 (25%)	0 (0%)	7 (25%)	1 (3.57%)	28 (100%)
TheStar	2 (2.90%)	44 (63.76%)	11 (15.94%)	4 (5.80%)	4 (5.80%)	4 (5.80%)	69 (100%)
Total	15 (7.77%)	86 (44.55%)	39 (20.21%)	12 (6.22%)	29 (15.03%)	12 (6.22%)	193 (100%)

Both Malay newspapers have slightly different percentages for their main types of coverage. Berita Harian extensively covered (28.21%) events related to sustainable energy that included their coverage of governmental ceremonies and product launches while Harian Metro preferred to offer direct news coverage (46.43%). However, news coverage is still mainly used in Berita Harian where 23.08% of its total coverage was news. It appears that Berita Harian gives more significance to the sustainable energy issue compared to Harian Metro because it still offered 15.38% of their coverage to editorials and 12.82% to issue coverage which usually provide bigger news space and critical content. Thus, just like their English newspaper counterparts, Malay newspapers also prioritized news coverage in their content.

In conclusion, both Malay and English newspaper have made news as the most important type of coverage in their sustainable energy related contents. It can be viewed through the total percentage of type of news coverage from all newspapers. News coverage has the highest percentage amongst all type of coverage that composed of 44.55% of the total coverage. However, the least percentage is shared by sponsored news and letter from readers, which made up only 6.22% for each type. This may be related to the fact that the newspapers had extensively sourced their news from government agencies thus leaving little space for sponsored news and letter from readers.

Table-8. The news frames used by the selected newspapers.

Types of coverage	Informational	Product Promotion	Issue focused	Call for action	Promoting government initiatives	Total
NST	10 (16.13%)	3 (4.84%)	5 (8.07%)	22 (35.48%)	22 (35.48%)	62 (100%)
Berita Harian	8 (18.18%)	6 (13.64%)	10 (22.73%)	9 (20.45%)	11 (25%)	44 (100%)
Harian Metro	7 (25.93%)	5 (18.52%)	2 (7.41%)	4 (14.81%)	9 (33.33%)	27 (100%)
TheStar	14 (19.18%)	20 (27.40%)	12 (16.44%)	12 (16.44%)	15 (20.54%)	73 (100%)
Total	39 (18.93%)	34 (16.50%)	29 (14.08%)	47 (22.82%)	57 (27.67%)	206 (100%)

RQ 4: How does a Malaysian newspaper frame news on 'sustainable energy'?

The frames in Table 8 were used in covering sustainable energy can be categorized into; informational, product promotion, issue focused, call for action as well as promoting government initiatives (see Table 4 for operational

definitions). For News Straits Times, the two types of news frames with the highest percentages were the promoting government initiatives frame (35.48%) and call for action frame (35.48%). On the other hand, the product promotion frame was the most used by The Star (27.40%) However, government initiatives appeared to be the highest combined percentage for English newspapers, which composed of 27.41%. This pattern is not entirely surprising as mass media such as newspapers are known for their role of as the channel for governments to engage with the society as mentioned by [Kasim, Ismail, and Abd Wahab \(2018\)](#). The News Straits Times used a more persuasive voice in the framing of sustainable energy issues as 35.48% of its coverage were directed to call for action. Through this frame, the newspaper used its platform to persuade the public into adopting sustainable energy in their everyday life while supporting sustainable energy initiatives by the government and other related entities. The Star also used the call to action frame in much of its coverage, totalling 16.44% of their total coverage. Although not as much when compared to News Straits Times, The Star's use of persuasive voice was still significant especially when compared to the Malay newspapers that focused merely on informational and promotional frames. Just like the English newspapers, promoting government initiatives is the most popular frame use in their coverage of sustainable energy. It was found that 25% of Berita Harian's and 33.33% of Harian Metro's coverage were focused on promoting government initiatives such as the use of solar power in schools and government buildings. Berita Harian used the issue-focused frame significantly compared to all the other newspapers which comprised of 22.73% of their total coverage. It was found that most of issues related to sustainable energy was not really about its importance but were related to a corruption case involving Datin Sri Rosmah Mansor, the wife of Malaysia's ex-Prime Minister Najib Razak ([Wan, 2018](#)). The case revolved around Rosmah's involvement in the solar panel contracts in Sarawak. This means that when sustainable energy issue is closely discussed in Berita Harian, it was complimenting a bigger criminal case and was not the main centre of the discourse. The call to action frame was scarcely used by the Malay newspapers. The frame only made up 20.45% of Berita Harian's and 14.81% of Harian Metro's coverage. Obviously, Malay newspapers did not make sufficient effort to construct sustainable energy discourse into the readers' mind. In sum, except for the News Straits Times, all the newspapers tend to be taking a non-partisan approach when discussing about sustainable energy. The newspaper were mostly promoting and informing but not discussing and stressing about the importance of sustainable energy in promoting a better future for Malaysians.

6. CONCLUDING DISCUSSION

To realize the promising potential of sustainable energy in Malaysia, close attention to media articles and related public reaction is essential. How the public reacts will have direct implications on sustainable energy projects acceptance and adoption. However the analysis in this study found that the amount of coverage given to sustainable energy is still relatively low. 168 news articles from 4 newspapers in a one-year span is minute when compared to the amount of news that are being published every day. While the study might have missed a number of related news due to technical or human error, the exact total amount of news could not be too far from what is recorded in this article. The Malaysian media still do not find the urgent need to focus on sustainable energy hence reflecting on a more dire condition where issues of environment and sustainability still do not find its place in the media agenda, making it less of a priority within public agenda.

Based on the findings, we can conclude that while all the selected newspapers did play a role in delivering and disseminating information about sustainable energy, it is the English newspapers that are more serious in their attempt. Not only did the English newspapers cover more about sustainable energy, they used sources, news types and frames that indicated the importance and urgency of the issue. By obtaining news from various sources such as universities and research companies, the English papers provided its readers with updated information that can offer multiple perspectives on sustainable energy. On the other hand, the Malay newspapers depended extensively on governmental agencies and journalist reporting, hence limiting the context of the issue. The English newspapers

also provided more depth to sustainable energy by providing more editorials and issue-focused coverage instead of just routinely sharing straightforward news reports. While the Malay newspapers were active in spreading the news about government initiatives, they did not allocate enough content that pushed a call to action. The English newspapers were more active in this sense whereby they used a significant number of action frames in their coverage hence persuading the public to become active supporters and adopters of sustainable energy. This disparate reporting style becomes a problem where the diffusion of news is concerned. When there is a difference in the coverage between the English and Malay newspapers, there will subsequently be a difference in the diffusion of news regarding sustainable energy. It would mean that only a section of the public, the one that reads the English papers that would be more aware, informed and engaged with sustainable energy. On the other hand, the readers of the Malay newspapers that make up the bigger section of the Malaysian public will be less informed and will not find the urgency in supporting sustainable energy more specifically; and sustainable environmental issues in general. Thus, there needs to be more calls for the Malaysian newspapers, most especially the Malay newspapers to cover about sustainable energy and place the issue high in the media and public discourse. More academic research can be done to inform the media on the importance of its role as an important entity in the preservation of the world we live in. There are certainly some limitations to the study. Although it did analyse the news content over a period of time, the results may be influenced by temporal and contextual factors. Additionally, though we did have the ambition to include a very wide range of possible categories, it was obviously impossible to include all possible ways of framing sustainable energy. It will be a task for future research to expand and refine the research frames.

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