

Media Attention for Climate Change Mitigation and Adaptation in Malaysia: A Comparative Analysis of Malaysia Chinese Newspaper Coverage

Cheong Jun Rong*

Department of Media Studies, Faculty of Art and Social Sciences, University of Malaya

Hasmah Zanuddin

Department Of Media Studies, Faculty Art and Social Sciences, University Of Malaya and Her Research Focus On Media Policy, Public Relations and New Media Technologies

Abstract

Climate change is a global problem and it is more likely caused by human activities and human greed. Studies on media representations of climate change by far are less potent on Asia country compared with Western societies. Climate change is one of the crucial issues and the media has been established to play an essential key role in constructing public awareness and policy adaptation. The research aims to examine and compare Malaysia's Chinese newspapers' portrayal on climate change mitigation and adaptation from January 2015 to December 2015. Agenda setting theory is used to guide this study. Two major Chinese newspapers in Malaysia which are Sin Chew Daily and China Press were chosen as content analysis materials as both newspapers have the highest readership and circulation compare with others Chinese newspaper. Through the analysis of Malaysia major Chinese newspaper, both newspapers have a different level of media attention on climate change mitigation and adaptation issue. The media attention includes news monthly distribution, news focus, news perception, news genre and domesticity. Both newspapers mentioned above represented a unique way of reporting climate change issue. The greater of media attention on climate change issue can provide a wider exposure with the community.

Keywords: Climate change; Chinese newspaper; Global warming; Content analysis.



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1. Introduction

1.1. Conceptualising Climate Change and Media

Climate change is one of the most complicated issues and the media undeniably needs to act a major part in changing public's judgement. In general understanding, climate change refers to Earth's climate or on a region of Earth facing a long-term change in average temperature (UNFCCC, 2011); (IPCC, 2013), For example, climate change could be a change in the region's average annual rainfall or a change in a city's average temperature for a long period or season. In this decade alone, climate change issue in news has been focused to reflect the importance of media in affecting public's opinion and policy adaptation. Unfortunately, most of the researches regarding climate change and media are mostly focus on Western country compare with Asia country.

According to WHO (2014), the release of huge quantities of carbon dioxide and other greenhouse gases is caused by human activities especially fossil fuels combustion over the last 50 years. The action prompted is to trap the extra heat in the lower atmosphere and caused the increase of global climate change. Human actions are contributing more drastic in climate change issue. Besides that, climate change can also cause some diseases such as vector borne diseases, heat stroke, asthma, bronchitis or other health related issues and being harmful to the public

In the current situation, the members of public are urged to understand the potential and adverse effect from climate change. Mitigation and adaptation actions are needed to be taken from day to day in daily life. Although the government plays an important role in dealing with climate change through law and legislation, public also need to show their willingness in voluntary mitigation and adaptation of climate change action.

In our daily lives, newspapers provide a host of tips and information about the salience of the topics in the daily news. Newspaper coverage can have positive or negative impact on the specific issue. Media plays a pivotal role in perpetuating the knowledge on the climate change to the public (Zanuddin H *et al.*, 2017). Toeing to this thought, to examine and compare the media practices in reporting and covering the climate change issue in newspapers is essential to have a deeper understanding on the role of print media in this field.

1.2. Research Question and Research Objective

Media has a significant role in educating and delivering the message to the community on certain issues. Newspaper is an official pathway to expose the messages because people typically start their day with newspaper instead of reading journals. What is the main news focus of Chinese newspaper in reporting global climate change issue and the news perception towards the issue above? This paper will explore and compare the news focus in reporting climate change issue and the news perception in selected Chinese newspaper which are Sin Chew Daily and China Press.

2. Literature Review

2.1. Agenda-setting Theory

The literature on agenda-setting is broad-scale and extensive range. In recent decade, there are more and more powerful mass media and their effect on public opinion has appeared. The broad scope definition of agenda setting involves the consideration of three related agendas which are media agenda, public agenda and policy agenda (Miller, 2005). Perhaps the most influential theory of media effects that applies to environmental news is agenda setting. (Cohen, 1988) suggested the idea of agenda setting is to distinguish between individual opinion and the public's perception of the salience or important of an issue.

In news reporting, it may not be successful to tell people what to think rather than telling the readers what to think about (McCombs and DL., 1972). The news report of climate change mitigation and adaptation need to tell the readers what to think about and gives opportunity for the public to think. Besides that, (Hansen, 1991) claimed that the media also acts as a powerful role in imposing the agenda for the public attention and their alertness on ecological issue especially climate change issue.

The power of media which is to set a direction according to the prominent of a news for the focus of public attention diverge towards a few different news is not an easy task at all. The readers or viewers also learn the importance of attaching to a topic among the different types of news. The agenda setting influence of the news media does not only focus the public's attention on a topic, but the media also has the responsibility to set up the media too.

On the other hand, the media influences the next step in the communication process which is the understanding and perceptive on the topic in the news. Malaysians approach mass media such as radio, newspaper or television to get formal news and information. The role of newspaper in media agenda become more complicated as the newspaper may become a prominent source of inter-media agenda setting (Weaver *et al.*, 2004). Similarly, the amount of news coverage in newspaper will affect the coverage in other news media such as television or radio.

2.2. Climate Change and Media Coverage

Over the years, climate change mitigation and adaptation issue has become a major topic of discussion. At the current situation, the average surface temperatures are expected to rise by 4°C by year 2100 WHO (2014). The Earth's temperature is getting warmer from year to year. Increasing the average temperature could also lead to more health problems such as heat stroke, heart attacks and other illness caused by the extreme temperature on Earth. Therefore, it is important to inform the community in order to create their awareness and better understanding on the climate change issue. For instance, the media acts as a crucial part in depicting key events or information sharing of climate change. News reporting can influence risk perception and the public understanding on climate change (Corfee-Morlot *et al.*, 2007). Therefore, the community would be able to receive information about climate change issue directly from the local newspapers which is closer to the readers.

Climate change mitigation and adaptation has been an issue for a long time. From reading and analysing the previous research, it shows that the studies on media representations of climate change are mostly concentrated on Western societies. In this decade alone, climate change issue in news has always been focusing in research to highlight the importance of media in affecting public opinion and policy adaptation. Unfortunately, most of the research regarding climate change and media are mostly focus on Western country compare with Asia country.

Schmidt *et al.* explained that climate change is a global phenomenon and its outcomes affect all the societies around the world. There are studies on media representations of climate change had so far concerned on Western societies. The study describes the development of media attention on climate change in 27 countries. Secondly, the study also compares the amount of media attention and explores whether it corresponds with the indicators measuring the relevance of climate change. As a result, the climate change coverage has increased in the 27 countries. Still, the overall media attention levels are different among these countries. Malaysia's Chinese print media had been selected as the main target to investigate the coverage of climate change mitigation issue towards the Chinese community to have a narrow and focusing attention.

Besides that, (FP *et al.*, 2013) claimed that the three important platforms of climate change issue discussions are science, media and policy. The three platforms mentioned above are significant in discussing climate change issue. In general, science is needed to strengthen the public's consciousness on climate change issue. For media, it is essential in delivering this knowledge to the community while the policy platform enables both media and science elements to get involved in addressing the climate change issue.

In Malaysia, another media coverage on climate change issue has been conducted focusing on Malaysia mainstream newspaper which are New Straits Times, Utusan Malaysia, Berita Harian and The Star (Azmi *et al.*, 2015). The selected newspapers only focus on two languages which are Bahasa Malaysia and English. The results revealed that the coverage of climate change was effected by other global climate change event. It is adequate to label the media coverage on selected mainstream newspaper as the reflection of the whole Malaysia community.

3. Methodology and Materials

3.1. Quantitative Content Analysis

The methodology used in this research is quantitative content analysis. According to Berelson (1971), content analysis is a research technique for the objective, systematic, and quantitative description of the clear and obvious content of communication. Generally, quantitative content analysis contains three essential elements which includes objective, systematic and quantitative. The objective indicates to analyse a message or context, formulated rules and procedures are most importance to avoid bias while categorizing and measuring the messages. Systematic content

analysis consists of a systematically rules and steps in analysing the contexts while quantitative indicates the measuring of it.

In the process of collecting news related to the research, a few keywords have been determined as the keywords that appear in the headlines or content such as “climate change mitigation”, “global warming” or “greenhouse effect”. The news that contains the above keywords will be selected as the research materials. Quantitative content analysis is a useful tool to analyse or measuring a message from different media platform (Zanuddin H. and Ambikapathy, 2017a); (Amahallawi. W and Zanuddin. H, 2017); (Abdoulaye O. and Zanuddin H, 2017); (Tham and Zanuddin, 2015).

During the data collection phrase, the analysing of the news was conducted from the front page of the newspaper to the last page, from the top to the bottom of the news, from the left of the page to the right to get any news that are related to the research. The keywords can be determined from the news headlines, photo captions and the first three columns of news. After some clarification of sampling selection, data analysis can be carried out when the data collection has done. Photo is an important element in the news as the photos can expose the background and backstories the news (Zanuddin H. and Ambikapathy, 2017a); (Amahallawi. W and Zanuddin. H, 2017); (Zanuddin H *et al.*, 2017). Therefore, a news which attached with a picture or graphic can attract more attention.

3.2. Newspaper Selection

In this research, Sin Chew Daily and China Press were selected as research materials because both newspapers have the highest circulation and readership during year 2015 compared with others Chinese newspapers in Malaysia (Media Planning Guide Malaysia, 2015). The figures are shown in Table 1 below:

Table-1. Readership and circulation for major Chinese newspaper in Malaysia

Daily Newspaper	2015 readership	Circulation 22
Sin Chew Daily	1,390,000	364,739
China Press	1,072,000	210,053
Oriental Daily	317,160	85,616
Nanyang Siang Pau	88,000	80,000

3.3. Time Frames

The climate change mitigation and adaptation stories were examined from January 1st, 2015 to December 31st, 2015. The total news articles that were found from Sin Chew Daily is 83 and with 46 news from China Press. The reason for choosing the year 2015 as the time frame is the global average temperatures in that year broke the record of having the highest temperature compared to the previous year temperature in 2014 by increasing 0.13°C. According to independent analyses by National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA), Earth’s 2015 surface temperatures were the warmest since modern record keeping began in 1880 (Brown *et al.*). In a nut shell, the planet is getting warmer and warmer over the century.

3.4. Coding Book and Coding Sheet

In this research, the coding book and coding sheet are the important instrument to carry out the quantitative content analysis. The coding book has three sections, which are Section A: Basic Information, Section B: Budd’s Attention Score (Budd, 1964) and Section C: News Content. The basic information includes the name of the newspaper, date, headline, translation, page and picture usage. For Budd’s Attention Score Budd (1964), section, there are five important criteria by Budd (1964) to examine the news salience and news prominence for both newspaper. The five criteria are length of headline is more than two columns and it should be more than half a page of the newspaper, the news article is on the front page, the news article is above the fold and the total of news coverage is occupied more than (WHO, 2014); (Zanuddin H. and Ambikapathy, 2017a) on the column. One point is assigned to any articles which meets any of the criteria mentioned above. For news content, the background data of the news article such as news perception, focus of domesticity, journalistic genre and news focus are included in this section. In the process of collecting news, a few keywords have been determined as the keywords that appear in the headlines or contains of the news such as “climate change”, “global warming” or “greenhouse effect”.

4. Results and Findings

4.1. Frequency of News Article Distribution according to Month

Table-2. News article distribution according to months in year 2015

	Newspaper				Total
	Sin Chew Daily	Percentage	China Press	Percentage	
January	10	12.0	4	8.7	14
February	2	2.4	2	4.3	4
March	11	13.3	2	4.3	13
April	4	4.8	5	10.9	9

May	9	10.8	0	0	9
June	6	7.2	6	13.0	12
July	8	9.6	5	10.9	13
August	5	6.0	4	8.7	9
September	4	4.8	4	8.7	8
October	6	7.2	2	4.3	8
November	6	7.2	4	8.7	10
December	12	14.5	8	17.4	20
Total	83	100	46	100	129

In this research, a total of 129 news articles were analysed during year 2015. From the entire amount, Sin Chew Daily contributed a total of 83 news articles while China Press has contributed 46 news articles. In term of news articles distribution according to months, both newspapers showed the most number of climate change issue news articles during December. This indicated that newspapers focused on issue of climate change during the 2015 United Nations Climate Change Conference, COP (Media Planning Guide Malaysia, 2015) or CMP (Schmidt *et al.*) which is from 30 November to 12 December 2015, that happened in Paris, France. The main intention of the newspapers is to attract the public’s attention on the issue mentioned above. From the result, Sin Chew Daily and China Press have a different amount of news articles in year 2015 according to months. Sin Chew Daily contributed more news articles on global climate change event such as Earth Hour during March while China Press only contributed (IPCC, 2013) news articles during the same month. The news articles reported in China Press were more consistent.

4.2. Budd’s Attention Score (Budd, 1964)

Table-3. Budd’s attention score according to Chinese newspapers in year 2015

Newspaper	Budd’s Attention Score
Sin Chew Daily	2.34
China Press	1.37
Total	1.99

As shown in Table 4, Budd’s attention score (Budd, 1964) for Sin Chew Daily during year 2015 obtained 2.34 while China Press only has 1.37. The total of Budd’s attention score for both newspapers related to climate change mitigation is 1.99. The overall Budd’s attention score for Sin Chew Daily is more than China Press. The results show that the attention score has is very low on climate change issue for China Press. Sin Chew Daily obtained a higher score because most of the news related to climate change mitigation has eaten up more space in newspaper. This is slightly related to the floods happened in Malay Peninsular and some areas in Sabah during December 2014 and Sin Chew Daily highlighted most of the news related to floods on the front page of the newspaper. Sin Chew Daily journalists also paid more attention on Paris Climate Change Conference during November 2015. Overall, China Press chose to focus on the current news such as political news or breaking news rather than environmental news.

4.3. News Perception

Figure-1. News perception according to Chinese newspaper in year 2015

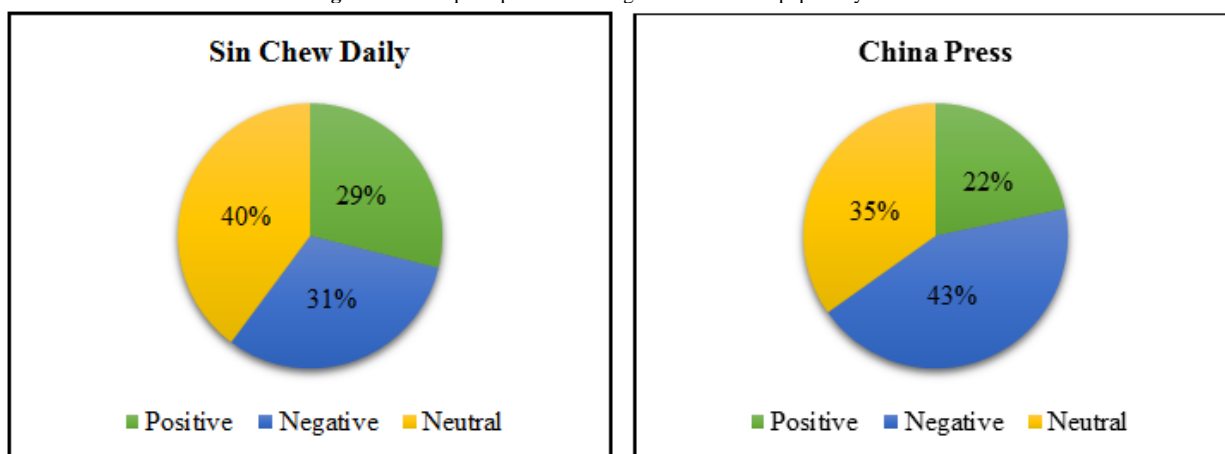


Figure 1 shown the news perception on Sin Chew Daily and China Press in year 2015. Among the total of 83 news articles, Sin Chew Daily delivered a neutral perspective of news articles which contributed 33 neutral news (40%), followed by 26 negative news (31%) and 24 positive news (29%). For China Press, the journalists pressed on more negative issue articles which are (Zanuddin H *et al.*, 2017) news articles (43%). Some of the justifications of positive news articles are the improvement in the situation of climate change, efforts to solve or reduce climate change issue, positive feedback for global warming or well adaptation for climate change issue. From the analysis,

China Press focused more on negative news articles which is an inverted situation mentioned above such as the negatively effects from climate change issue. Sin Chew Daily showed more neutral news articles as there is no bias in the news articles. This is a more encouraging way to deliver message to the public while China Press used a unique way of reporting news which highlights the messages about the damage from climate change issue. One of the advantages of reporting negative news is to alert the community with the worst situation to develop more awareness among them. People are more alert of the issue when they know how the climate change issue will affect them.

4.4. Focus of Domesticity

Table-4. News articles distribution according to focus of domesticity

	Newspaper				Total	
	Sin Daily	Chew	Percentage	China Press		Percentage
National	23		27.7	15	32.6	38
Domestic	27		32.5	11	23.9	38
International	33		39.8	20	41.1	53
Total	83		100	46	100	129

Table 4 shows the news articles distribution according to focus of domesticity. Sin Chew Daily and China Press had similarities in reporting climate change news which both newspapers recorded the highest news in reporting international news which are 33 news articles and 20 news articles respectively. The news articles are mostly focused on international news with a total of 33 or 39.8% in Sin Chew Daily and 20 or 41.1% in China Press. On the other hand, Sin Chew Daily focused less on National news while China Press chose to not pressing on Domestic news. Domesticity plays an important role in news as a significant element that the acts as the news source originated from local people such as politicians, government official or ordinary Malaysian citizens. It will give an impact of closeness between the issue and the people. However, the international news will bring related issue on climate change issue but it will create a distance and far fetch policy impact towards the people. Some of the news that covered extreme temperature or flash flood which is closely to Malaysian citizens will impact the readers more because the following disasters happened in Malaysia and it affects their daily life.

4.5. News Genre

Figure-2. New articles distribution according to news genre

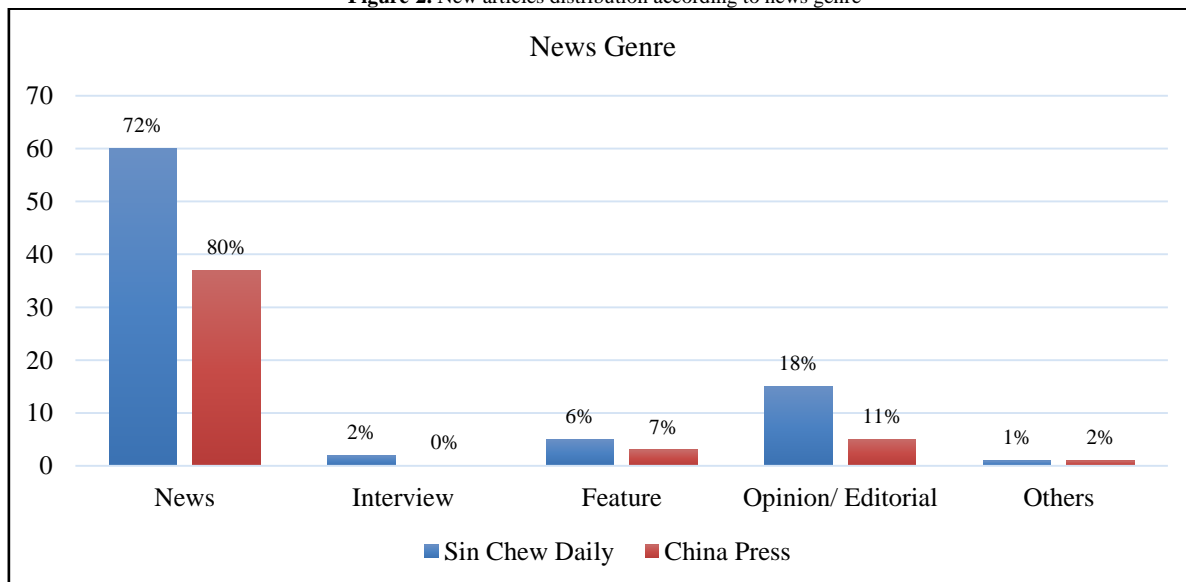


Figure 2 shows the news articles distribution according to news genre which includes news, interview, feature, opinion or editorials and others. From the result, Sin Chew Daily and China Press illustrated news the most compared to other categories. Sin Chew Daily reported 60 news articles out of 83 while China Press reported 37 news articles out of 46. The news included the pure news or a report about climate change issue. The opinion or editorial category consists of the view from public or editor. The opinion or editorial genre is related closely to news genre because the public or editors always point out their opinion after news related with climate change has been reported. Normally, the opinion from public and editors focused on encouraging or educating the community with the climate change mitigation ways such as 3R activities, power saving or reduce emission of carbon dioxide. The other category represented the advertisement or comic in the newspapers. Sin Chew Daily had one news with

advertisement while China Press published a comic strip that is related to the ways of mitigation regarding climate change issue. The news genre for both newspapers is similar and it focuses on reporting pure news in newspapers.

4.6. News Focus

Table-5. News articles distribution according to focus of news

	Newspaper		Total
	Sin Chew Daily	China Press	
Flood	9	3	12
Flash Flood	6	1	7
Extreme Temperature	16	10	26
Droughts	2	4	6
Diseases	1	0	1
Air Pollution/ Haze Problem	5	6	11
Sea Level Rise	0	2	2
3R Activities (Reduce, Reuse and Recycle)	13	6	19
Reduce Emission of Carbon Dioxide	22	7	29
Glacier Collapses	0	1	1
Others	9	6	15
Total	83	46	129

Table 5 shows the news articles distribution according to focus of news. From the result, Sin Chew Daily reported the highest news articles related with reduce emission of carbon dioxide which has 22 news articles out of 83. On the other hand, China Press focused on reporting the extreme temperature especially on the higher temperature during June and July 2015 in Malaysia. China Press focused more on issues related with the community to ensure a closer relationship between the media and the reader. Sin Chew Daily also published news focused on extreme temperature but the number of articles is less than the one that focused on reduce emission of carbon dioxide.

5. Conclusion

Climate change mitigation and adaptation issue has turned into a very important matter in the world for decades. Media possess an important role in educating and influencing public's perception. From the detailed content analysis of climate change issue coverage, it can be concluded that climate change issue coverage has a lower attention level compared to the others news such as political news, community news, entertainment news or breaking news. Still, the overall media attention level for both newspaper is different. Sin Chew Daily has a greater media attention level on climate change news compared to China Press.

On the other hand, both newspapers shared a similar characteristic which means the media attention level is affected by the global climate change event. Most of the news reported in the newspapers are related to global climate change issue. During some global events such as Earth Day 2015 or Paris Climate Change Conference November 2015, the numbers of news appeared in newspaper are greater than the other months. From the detailed analysis, both newspaper also obtained a unique way in reporting the climate change issue. Sin Chew Daily concentrated on more adaptive ways to mitigate climate change issue while China Press focused more on the negative effects of climate change to the community.

Eventually, fighting climate change is an on-going effort and the government should lead the community and obtain everyone's support in the country. This study compared the news articles from the highest circulation and readership Chinese newspaper in Malaysia for year 2015. It is rather insufficient but it would be worthwhile to analyse and study the newspapers from four different languages such as Malay language, English and Tamil to contrast the ways of communicating to the readers respectively according to different newspapers. Furthermore, comparative studies on climate change communication among different newspapers are rather important for the understanding of how differently the communities react to this global issue.

References

- Abdoulaye, O. and Zanuddin H, e. (2017). Online media's role in public health information and communication sharing in Cote d'Ivoire (Ivory Coast). *AsiaInternational Multidisciplinary Conference*; ; UTM Johor, Malaysia.
- Abdoulaye, O. K. and Zanuddin, H., 2017. "Online media's role in public health information and communication sharing in Cote d'Ivoire (Ivory Coast)." In *AsiaInternational Multidisciplinary Conference*.UTM Johor, Malaysia.
- Alyousef, Y. and Zanuddin, H., 2017. "Saudi Arabian government crisis management and prevention strategies: Has it been effective to curb the presence of radical groups in the social media?" In *Asia International Multidisciplinary Conference*.UTM Johor, Malaysia.

- Amahallawi, W. and Zanuddin, H., 2017. "50 days of war on innocent civilian: Ma'an news agency coverage of Israeli and Palestinian conflict." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Amahallawi, W. and Zanuddin, H. (2017). 50 days of war on innocent civilian: Ma'an news agency coverage of Israeli and Palestinian conflict. *Asia International Multidisciplinary Conference*; ; UTM Johor, Malaysia.
- Ambikapathy, M. and Zanuddin, H., 2017. "Gatekeeper or crisis manager? Coverage of "Lahad Datu" conflict." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Azmi, N., Omar, N., Zaid, S., Wahab, Z. and Yusof, A. (2015). Media portrayal on global climate change An analysis of Malaysian mainstream newspapers. *Studies in Media and Communication*, 3(1): 73-8.
- Berelson, B. (1971). *Content analysis in communication research*. Hafner: New York, NY.
- Brown, D., Cabbage, M., McCarthy, L., NASA and NOAA analyses reveal record-shattering global warm temperatures in 2015 [updated Aug. 4, 2017; cited 2017 21 January]. Available: <https://www.nasa.gov/press-release/nasa-noaa-analyses-reveal-record-shattering-global-warm-temperatures-in-2015>.
- Budd, R. (1964). Attention score: a device for measuring news 'play'. *Journalism Quarterly*, 41(2): 259-62.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. 2nd edn: Lawrence Earlbaum Associates: Hillsdale, NJ.
- Corfee-Morlot, J., Maslin, M. and Burgess, J. (2007). Global warming in the public sphere. Philosophical transactions of the royal society of london, Mathematical. *Physical and Engineering Sciences*, 365(1860): 2741-76.
- FP, K., JJ., P. and S., A. (2013). Platforms of climate change: An evolutionary perspective and lessons for malaysia. *Sains Malaysiana*. 42(8): 1027-40.
- Hansen, A. (1991). The media and the social construction of the environment. *Media, Culture & Society*, 13(4): 443-58.
- IPCC, C. c. (2013). *The physical science basis: Working group i contribution to the fifth assessment report of the intergovernmental panel on climate change*. Cambridge University Press: Cambridge:.
- McCombs, M. and DL., S. (1972). The agenda-setting function of mass media. *Public opinion quarterly*, 36(2): 176-87.
- Media Planning Guide Malaysia (2015).
- Miller, K. (2005). *Communication theories: Perspectives, processes, and contexts*. 2nd edn: McGraw-Hill: New York, NY.
- Mudjirin, C. and Zanuddin, H., 2017. "Political information sharing pattern and trend among students in the Islamic boarding school in Madura, Indonesia: A non-digital choice? ." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- NASA.
- NOAA.
- Schmidt, A., Ivanova, A. and Schäfer, M. Media attention for climate change around the world A comparative analysis of newspaper coverage in 27 countries. *Global Environmental Change*, 23(5): 1233-48.
- Tham, J. and Zanuddin, H. (2015). Religion and media: A case study of utusan malaysia's response to hiv/aids. *Continuum. Journal of Media & Cultural Studies*, 29(1): 121-33.
- UNFCCC (2011). Fact sheet: Climate change science - the status of climate change science today. *United Nations Framework Convention on Climate Change*: Available: https://unfccc.int/files/press/backgrounders/application/pdf/press_factsheet_science.pdf
- Weaver, D., McCombs, M. and Shaw, D. (2004). *Agenda-setting research: Issues, attributes, and influences*. In: *Kaid LL, editor. Handbook of political communication research*. Lawrence Erlbaum: Mahwah, NJ. 257-82.
- WHO, 2014. "Conference on health and climate change report."
- Zanuddin, H. and Ambikapathy, M. (2017a). *editors. Visual framing of Lahad Datu conflict coverage in Malaysian mainstream newspapers. Asia International Multidisciplinary Conference; UTM Johor, Malaysia.*
- Zanuddin, H. and Mukhtar, N., 2017. "Local product brand image: A case study of small and medium enterprises in Muar, Johor." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Zanuddin, H. and Ganjian, M., 2017. "Media, politicization of colors and construction of identity: The role of colors in social movements and revolutions." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Zanuddin, H. and Watimin, N. H., 2017. "Public opinion formation: The role of independent media portal during crisis." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Zanuddin, H. and Alyousef, Y., 2017. "Social media grooming: The relationship of social media, youth and terrorism in Saudi Arabia." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Zanuddin, H. and Ambikapathy, M., 2017b. "Visual framing of "Lahad Datu" conflict coverage in Malaysian mainstream newspapers." In *Asia International Multidisciplinary Conference*. UTM Johor, Malaysia.
- Zanuddin H, Ganjian, M. and editors, 2017. "Media, politicization of colors and construction of identity: The role of colors in social movements and revolutions. ; ; UTM Johor, Malaysia." In *Asia International Multidisciplinary Conference*.