

Measuring Constructive Journalism in *Kompas.com*'s Climate Change Articles

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Abstract

Climate change poses a significant threat globally. Due to the heavy nature of the issue, climate change news tends to be very negative. Overly negative news can cause psychological disruption and make people avoid the news. The news media plays a huge role in climate mitigation, adaptation, and people's perspectives on climate change, making it crucial for them to communicate climate change effectively. Constructive journalism may be the solution to this issue. With constructive journalism, journalists avoid negativity bias by focusing not only on the negatives but also on the solutions and positives when reporting a story. This study conducted a quantitative content analysis on 123 climate change articles reported by Kompas.com in 2020 using the six elements of constructive journalism. This research found that Kompas.com's climate change articles in 2020 were not constructive. The articles emphasized the consequences of climate change with minimal constructive elements to balance the negativity.

Keywords: Constructive Journalism; Climate Change; Quantitative Content Analysis

Abstrak

Perubahan iklim merupakan ancaman global yang signifikan. Karena beratnya isu tersebut, berita perubahan iklim cenderung sangat negatif. Berita yang terlalu negatif dapat menyebabkan gangguan psikologis dan membuat orang menghindari berita. Media berita memainkan peran besar dalam adaptasi dan mitigasi iklim, juga perspektif masyarakat tentang perubahan iklim. Karena itu, penting bagi media berita untuk mengomunikasikan perubahan iklim secara efektif. Jurnalisme konstruktif dapat menjadi solusi untuk masalah ini. Dengan jurnalisme konstruktif, jurnalis menghindari bias negatif dengan berfokus tidak hanya pada hal-hal negatif tetapi juga pada solusi dan sisi positif saat meliput sebuah berita. Penelitian ini melakukan analisis isi kuantitatif menggunakan enam elemen jurnalisme konstruktif terhadap 123 artikel perubahan iklim yang dipublikasi oleh Kompas.com pada tahun 2020. Hasil studi menemukan bahwa artikel perubahan iklim Kompas.com pada tahun 2020 tidak konstruktif. Artikel-artikel perubahan iklim Kompas.com lebih menekankan pada konsekuensi dari perubahan iklim dengan elemen konstruktif yang dapat seimbangkan kenegatifan berita minim.

Kata Kunci: Jurnalisme Konstruktif; Perubahan Iklim; Analisis Isi Kuantitatif

Introduction

The earth's climate change has always been a natural process. However, the changes happening right now on earth are due to human activities, also called "anthropogenic climate change" (Riedy, 2016). Human unsustainable activities such as burning fossil fuels and clearing forests that generate greenhouse gas emissions have made climate change one of the world's biggest threats. In Indonesia alone, hydrometeorology disasters due to global warming have cost Indonesia 20 billion rupiahs every year for the past 20 years (Wardyaningrum, 2022). Globally, climate change has contributed to more than five million extra deaths a year, and this morality figure may worsen in the future (Zhao et al., 2021).

Due to the immense growth of climate advocacy, the attention on climate change is growing. A survey found that most are concerned about climate change and consider it a severe problem (Newman, Richard Fletcher, Schulz, Andı, & Kleis Nielsen, n.d.). To deal with climate change, the public must understand the issue and how to solve it. A survey found that the public is aware of climate change due to the news media (Carvalho, 2018). This means the media has a vital role in informing and educating the public on climate change in the most effective way possible. However, when it is crucial that people stay informed on climate change issues, more people seem to be avoiding the news intentionally. Studies found that people avoid the news because it negatively affects their mood or they feel powerless to change events (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019). Climate change news tends to be very grim. Climate change's risks and future impacts on people, animals, natural spaces, and landscapes may evoke feelings of loss and sadness, leading to fear and frustration about humans not taking meaningful actions (Cook et al., 2019).

"*If it bleeds, it leads-*" negativity surrounding the news is not unfamiliar in the field of academia. There is a plethora of research on negativity bias in the news and its effect on the audience. Studies found that exposure to negative information makes people less likely to take action and negatively affects their mental health, like depression and anxiety (Baden, McIntyre, & Homberg, 2019). Recent research by Kartinawati & Gama (2021) in Indonesia regarding COVID-19 news found that media is considered the cause of psychological disorders like anxiety and fear due to bad news. While studies usually focus on the effect on readers, they found that journalists also felt the negative psychological impacts (Kartinawati & Gama, 2021). This finding in 2021 shows that negativity bias is still a problem that needs solving in journalism. Yet, the solutions are available. Journalists can implement solution-based and positive reporting like constructive journalism.

Constructive journalism is a growing concept in the world of journalism and research. The term "constructive journalism" was coined by Karen McIntyre and Cathrine Gyldensted in 2017. As of December 2020, 73 published peer-reviewed articles and 21 thesis or dissertations on the concept are found (Lough & McIntyre, 2021). Constructive journalism aims for a more balanced approach where journalists address problems and the solutions and positive examples of how to handle challenges (Skovsgaard & Andersen, n.d.). This concept is not intended to replace traditional journalistic roles but rather complete them. Journalists who apply constructive journalism in their journalistic processes are no longer just watchdogs and detached observers. They actively shape the news, hold institutions accountable, and disseminate information, knowing that the news they produce will influence peoples' decisions, opinions, and everyday life (Hermans & Gyldensted, 2019).

Researchers who constructed constructive journalism advised an added dimension to journalism with positive psychology. Positive psychology techniques will help journalists portray the world more accurately, prevent negativity bias in the news, and increase civic engagement (McIntyre & Gyldensted, 2018). Positive psychology was originally a theory in the world of psychology. This theory is created from psychology research studies' very dark and negative nature. This area of psychology focuses on studying and practicing positive emotions, strengths, and virtues that make individuals and institutions thrive (van Antwerpen, Turnbull, & Searston, 2022).

To further deepen the contextualization of constructive journalism, the Journalism Department at the Windesheim University of Applied Science classified constructive journalistic elements (Hermans & Gyldensted, 2019). These are the six constructive elements and definitions according to Hermans & Gyldensted:

1. *Solutions*: adding a solution-oriented framing of the news when covering problems.
2. *Future orientation*: showing a possible productive perspective about the future and how we can achieve that future. Adding the question "what now?" to the traditional 5W+1H journalistic questions.
3. *Inclusiveness and diversity*: including more voices and perspectives in the news, working against the polarizing dynamics created by news media.
4. *Empower people*: Empower people by finding common ground on the issue reported.
5. *The Rosling*: Go from covering incidents to covering contexts and using data to create clear infographics and explain the news.
6. *Co-creation*: engage and empower the public by co-creating journalistic content with citizens.

Constructive journalism tends to be conflated with solutions journalism because of their similar approaches, but the two are not the same. Constructive journalism is an umbrella term where solutions journalism is a form of constructive journalism. To put into perspective, all solutions journalism is constructive journalism, but not all constructive journalism is solutions journalism (Overgaard, 2021). Lough & McIntyre (2021) recommended future research to define solutions and constructive journalism differently. Thus, this research emphasizes that while both concepts are solution-based reportings, constructive journalism and solutions journalism differ and will not use the terms interchangeably.

It is also essential to note that constructive journalism is not happy fluffy news. This research acknowledges the importance of negative aspects in the news, especially climate change news. Studies have shown that negative emotions in the news can help push change and emphasize the importance of climate change (Cook et al., 2019). Kartinawati & Gama's (2021) research found mixed reactions from journalists and audiences with the idea of journalists pushing more positive news since it can be seen as covering up facts (that tends to be negative). With constructive journalism, the facts and negativity are balanced with constructive elements. This also differentiates constructive journalism from positive journalism. Constructive journalism serves the traditional journalistic roles while positive journalism may not.

Previous research has found positive responses from professional journalists and audiences to constructive journalism. Constructive approaches were found helpful by journalists to navigate their roles as educators and provide hope without inciting panic (van Antwerpen et al., 2022). Audiences also prefer news with constructive elements,

even by younger people are seen as a complex group to reach by news media (Hermans & Gyldensted, 2019). In the context of climate change, Poort (2018) found that people prefer reading constructive articles and want to do more about climate change after reading them. This shows that constructive journalism could be one of the best ways to report and help climate change.

There has been a growing body of research on climate communication or how news media frames climate change. Content analysis is one of the most popular methods used in climate change research to examine how climate change is portrayed in various media (Metag, 2016). Analyzing news content can be done to examine how the news media constructively reports the news. But surprisingly, there seems to be a lack of analyses on climate change news in general and a detailed explanation of analysis using the six constructive elements.

One research by Vredenberg (2019) is the only study found similar to this research. Vredenberg (2019) analyzed *BBC*'s UN climate summits reports using constructive journalism, which focuses on the comparison of "positive" and "negative" tones rather than the constructive-ness of the article. It is found that the only constructive element used were the "solutions" element, and it has not found descriptions of analysis using the other five elements. The lack of detailed analysis using the six elements seems to be the case with other studies that used constructive journalism to analyze climate change-related articles. Another research by Atanasova (2019) also analyzed articles related to sustainability reported by a constructive news outlet. Although the paper uses constructive journalism as a concept, the research does an inductive frame analysis. Rather than analyzing using the 6 constructive elements, the paper tries to find other possible elements or frames in the articles analyzed.

Another thing the researchers found is that research studies that analyze the application of constructive journalism in news media articles seem to focus solely on the solution. However, according to Hermans & Drok (2018), constructive journalism emphasizes two elements: *solutions* and *inclusiveness and diversity*. So this study will highlight the *solution* aspect of constructive journalism and *inclusiveness and diversity*; without abandoning the other elements. Also, the researcher would like to note that there is still a lack of information on how to analyze an article using the inclusiveness and diversity element truly quantitatively. Many factors determine if something is diverse and inclusive, like race, gender, ethnicity, religion, etc. However, previous research studies seem to emphasize *diversity* in terms of sources or perspectives and *inclusiveness* in terms of the empowerment of minority and vulnerable groups.

Research on constructive journalism also seems to be lacking in Indonesia. This aligns with Lough & McIntyre's (2021) research findings that mainly found constructive journalism research in the United States and Europe—lacking research in Asia, Africa, and Latin America. They call for more research globally to compare how constructive journalism is applied in different countries.

Seeing each previous study's different approaches, this research focuses on analyzing climate change articles as a whole without choosing any specific climate change-related events or problems and the type of news content (editorial, news, etc.). This study will use a deductive method to analyze the articles using the six constructive elements classified by Hermans & Gyldensted (2019). Each element's findings and how it is coded will be elaborated descriptively with charts and descriptions. As there is still a lack of analysis using the six constructive elements and the relatively new concept for research, it is hoped that the results from this study could contribute to the development

of quantitative content analysis using constructive journalism elements.

Method

This research conducted a quantitative content analysis of 123 climate change articles by *Kompas.com* published in 2020. *Kompas.com* is chosen for its popularity in Indonesia; they are known as one of the most credible Indonesian mainstream news media. According to a 2020 survey, *Kompas.com* is Generation Z & Y's favorite online news portal (Ayunda Pininta Kasih, 2020). During initial research, when typing "perubahan iklim" in their search bar, *Kompas.com* is found to have the most climate change articles in comparisons to other popular online news media like *Tempo.co*, *Detik.com*, and *Tribunnews.com*. As one of Indonesia's most prominent mainstream news media, they must report climate change news in the most effective way possible. Through a quantitative content analysis, this study will obtain quantitative data, finding the amounts and percentages of constructive elements found in the articles. The study results will be presented descriptively, accompanied by tables and graphs.

To collect the articles needed for analysis and to identify the number of articles published in 2020, the researchers first entered the word "perubahan iklim" (climate change) on the search bar of *Kompas.com*. Yet, it led to an incomplete list of climate change-related articles in 2020, with only ten pages provided. Eventually, the researchers visited one of *Kompas.com*'s climate change articles and found a tag section on the bottom part of the page, finding the "perubahan iklim" tag. Clicking on the tag led to a page with a complete list of every climate change article ever published by *Kompas.com* that can also be accessed with the URL: <https://www.kompas.com/tag/perubahan+iklim>. The researchers manually collected and listed every climate change article published in 2020. Listing the article title, date of the published article, and the article's writer and editor in Microsoft Excel.

After data collection, it is found that there are 134 climate change articles published by *Kompas.com* in 2020. The articles are then sorted to eliminate any irrelevant articles or those that had been published before (two or more articles with the same title and body text), leading to a total of 123 articles that can be analyzed. Due to the small number of samples, this research will analyze all 123 climate change articles published by *Kompas.com*.

Quantitative content analysis was done using the six elements of constructive journalism: *solutions, future-oriented, inclusiveness and diversity, empower people, The Rosling, and co-creation*. To do that, the researchers listed all the articles and the 6 elements in an Excel sheet. The texts are coded with two values which are 1 (present) and 0 (not present) in the coding sheet. Coding is done to identify the existence of the constructive elements found in the articles, and the frequency of each element's occurrence will be analyzed as a whole. For example, if an article contains the solutions element, the element is coded "1" and "0" if none is found. Eventually, to analyze the constructive-ness of *Kompas.com*'s climate change articles in 2020, each element's total of "1" will be summed and presented with percentages and graphs in the results section. Here is a more detailed explanation of how each element is coded:

1. *Solutions*: solutions may vary from existing solutions, possible solutions, solutions already implemented, collaborations, and pieces of advice from activists or experts. Any statement that provides information and explanation of how to solve climate change or problems because of climate change will be coded "1."

2. *Future orientation*: any statement that shows a positive prediction or scenario of what can happen in the future (if a solution is implemented) will be coded “1.” Negative future outlooks are not coded.
3. *Inclusiveness and diversity*: to code this element, two sub-elements are used:
 - Diverse sources: articles that have two or more perspectives, sources will be coded “1.”
 - Empowerment of vulnerable groups: articles that cover issues minority and vulnerable groups (indigenous people, farmers, immigrants, etc) face due to climate change will be coded “1.”The sum of the two sub-elements will later be combined to find the *inclusiveness and diversity* element as a whole.
4. *Empower people*: articles that include common grounds are looked for. Common grounds mean stories and perspectives in the articles that is relatable to the public and possibly empowers them. Like stories of regular people fighting climate change, how a student donated their money for wildlife conservation, including the perspectives of ordinary citizens, etc.
5. *The Rosling*: to code this element, three sub-elements are used:
 - Numerical Data: numbers, dates, percentages, frequencies, etc.
 - Visualized Data: Images and videos that doesn't show and provide any data is not coded. Visualized data is data packaged through illustrations, videos, graphs, charts, etc.
 - Context: to code this, the article must contain the 5W+1Hs.The sum of the three sub-elements will later be combined to find the *The Rosling* element as a whole.
6. *Co-creation*: journalistic work (article, investigation, video, etc) which is a result of a collaboration between the journalist and the public. In this research, any articles written by non-journalists will be coded “1.”

Results and Discussion

Results

This research found 134 climate change articles by *Kompas.com* in 2020, and after sorting any irrelevant articles, only 123 articles were used. It is found that January has the most articles (21 articles) and June has the least number of articles (2 articles). The lack of articles may be due to technical issues where *Kompas.com* did not or has not inputted all climate change-related articles on the list. In the next part, each element of constructive journalism found in *Kompas.com*'s climate change articles will be discussed.

Solutions

The solutions elements coded varied from existing solutions, possible solutions, solutions already implemented, collaborations, pieces of advice from activists or experts, etc.

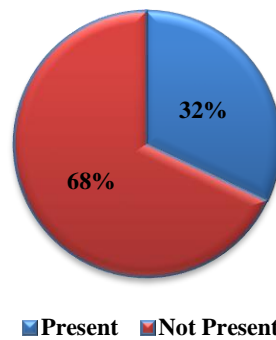


Figure 1. Frequency of *Solutions* Element Occurrence
Source: Author's analysis

As seen in Figure 1, out of the 123 articles analyzed, only 32% of their articles contained this element. The solutions element is a huge massive of constructive journalism as one of the primary purposes of constructive journalism is to get rid of negativity bias in news media and provide a more balanced view of an issue and the world. The researchers found that *Kompas.com* mainly focuses on the consequences of climate change while lacking information on what can be done about the issue. It is also found that only a couple of articles had a balanced amount of solutions and negativity, meaning that articles either do not provide any solutions, provide vague and short solutions, or the entire article focuses on the solutions. Here is one example of how *Kompas.com* includes the *solutions* element in their article titled “*No Need To Be Vegan To Save The Earth From Climate Change, As Long As...*”:

“*The world does not need to go meat-less to reach the climate target. We can consume better and healthier food by changing how we plant food and to reduce food waste,*’ said Jason Hill, Professor of Biological Engineering at the University of Minnesota, the United States, who is also the study’s author.” (*Kompas.com*, 2020)

The entirety of this article focuses on solutions. The article aims to share how there are other alternatives to going vegan to help solve climate change with very minimal negative information.

Future-oriented

Paragraphs and sentences that contain this element may include an optimistic prediction of the future if a solution is implemented or some action is done.

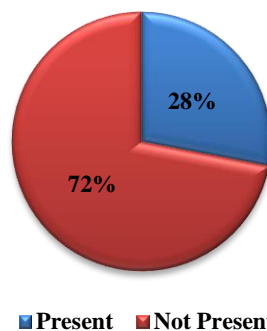


Figure 2. Frequency of *Future-Oriented* Element Occurrence
Source: Author's analysis

As seen in Figure 2, out of the 123 articles analyzed, 28% of their articles contained this element. This finding is not surprising, seeing the also low percentage of the *solution-oriented* element. Because to see an optimistic future, information on solutions and knowing how to get to that optimistic future is needed. The *future-oriented* element can help the public fully understand and imagine how implementing the solutions can change the problem. Understanding that the positive future can be achieved will help provide hope and encouragement to the public to realize that climate change is solvable. It could also provide hope and encourage the public to be an agent of change and contribute positively to the planet. Here is one example of how *Kompas.com* includes the *future-oriented* element in their article titled “*Post-pandemic Low Carbon Development Plan for a Greener Indonesia*”:

“*Low-carbon development through the circular economy itself continued Medrilzam, is predicted to have the potential to create as many as 4.4 million green jobs or sustainable jobs and contribute to increasing investment up to IDR 598 trillion in Indonesia’s economic value in 2030.*” (*Kompas.com, 2020*)

The article does not only mention the solutions provided by the Indonesian government to solve climate change which is the Low Carbon Development Plan, but also shows how the solution can help open new job opportunities and improve the nation’s economy in 2030 (*future-oriented*).

Inclusiveness and Diversity

As previously stated, to determine if an article contains this element, two aspects will be coded: the diversity of the sources and the empowerment of minority or vulnerable groups like farmers, indigenous people, immigrants, etc.

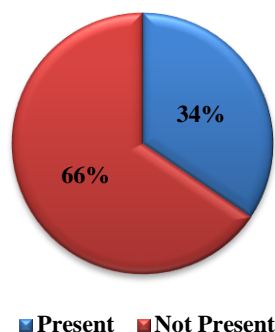


Figure 3. Frequency of *Inclusiveness and Diversity* Element Occurrence

Source: Author’s analysis

As seen in Figure 4, out of the 123 articles analyzed, 36% of their articles contained this element. The *inclusiveness and diversity* element is another essential element in constructive journalism. *Kompas.com* did a great job having diverse perspectives in their articles, with 67% of their articles containing that aspect. Although, only 2% contained the empowerment of minority or vulnerable groups. This means that while *Kompas.com* included multiple perspectives and sources in their articles, they didn’t cover a lot of climate change issues related to minority or vulnerable groups in 2020. An article by *Kompas.com* titled “*When Climate Change Makes Gunungkidul Farmers’ Decades of Knowledge Often Wrong*” is one article that include the aspect of empowering minorities and vulnerable groups. The article shares how farmers from

Gunungkidul no longer can use their traditional knowledge when working due to unpredictable weather because of climate change.

Empower People

To code this element, articles that include common grounds are looked for. Common grounds mean stories and perspectives in the articles that may be relatable to the public. Examples of the application of this element may look like: stories of regular people fighting climate change and including the perspectives of ordinary citizens. This element can help make climate change issues closer to the general public.

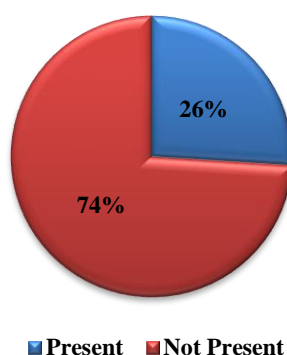


Figure 4. Frequency of *Empower People* Element Occurrence
Source: Author's analysis

As seen in Figure 4, out of the 123 articles analyzed, 26% of their articles contained this element. This means there is still a lack of the inclusion of the stories and perspectives of the general public. Most of the climate change topics that *Kompas.com* wrote in 2020 are mainly scientific findings from journals and reports like ancient viruses trapped on ice found and the decline of the bee population in Europe. How *Kompas.com* chooses its climate change topics can be the reason why public-oriented elements like *inclusiveness and diversity* and *empowering people* have low percentages. Here is one example of how *Kompas.com* includes the *empower people* element in their article titled “*UBL Invites Young People to Dare to Call for “How Dare You” through vlogs*”:

“This is a real action for us young people to answer the challenges of environmental problems. So we hope this vlog competition is an action in the form of documentation so that it can be used by the wider community to increase environmental awareness in the community,” Diva told Kompas.com.” (*Kompas.com, 2020*)

In this article, *Kompas.com* wrote about an event by the International Relations Student Association from Budi Luhur University. Articles like this, where the news media covers the enthusiasm and involvement of regular people, and students, in saving the planet can help inspire the public to do so. This also shows that young people are also highly concerned with climate change.

The Rosling

This element emphasizes the importance of data, the usage of infographics, and context. So, to code this element, three aspects are looked for: numerical data, visualized data

like graphs and charts (illustrations or images that do not present any data are not included), and context (5W+1H).

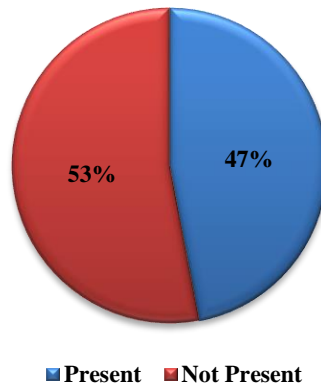


Figure 5. Frequency of *The Rosling* Element Occurrence
Source: Author’s analysi

As seen in Figure 5, out of the 123 articles analyzed, 47% of *Kompas.com*’s articles contained this element. Out of the three aspects coded, having context received the highest percentage (72%), with the least being visualized data (3%). The Rosling is the element that has the highest percentage out of the other five elements found in *Kompas.com* articles. This means *Kompas.com* lacks visualized data but has included enough numerical data and context to its climate change articles in 2020. A good example is their article titled “*Impact of Climate Change, A Small Island in Indonesia Threatened to Sink.*” The article has all three aspects of *The Rosling* element: numerical data, visual data (image and even video), and context.

Co-creation

With this element, non-journalists contribute to the news together with the journalist. To code this element, articles containing this element are usually written contributor writers (non-*Kompas.com* journalists), whether it be the general public or academics.

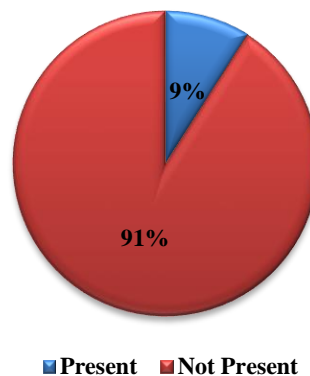


Figure 6. Frequency of *Co-Creation* Element Occurrence
Source: Author’s analysis

As seen in Figure 6, out of the 123 articles analyzed, 9% of *Kompas.com*'s articles are a product of *co-creation*. This element received the lowest percentage out of the other elements, which relates to Hermans & Gyldensted's (2019) research which found that this element is the least valued element out of the six.

Discussion

This study aims to quantitatively present the application of constructive journalism in *Kompas.com*'s climate change articles reported in 2020, using the six elements of constructive journalism. During sample gathering, it was surprising to find only 134 (but only 123 were relevant) climate change articles knowing that 2020 experienced a lot of climate change-related disasters and problems globally. *Tempo.co* reported that according to Indonesia's Agency for Disaster Management (Badan Nasional Penanggulangan Bencana), 99% of the disasters in Indonesia in 2020 are related to hydrometeorology highly associated with climate change (Bisnis.com, 2022). It could be suspected that they might have reported those climate-related issues but failed to mention climate change as the reason those problems exist. People need to know that the environmental disasters and crises we experience are not natural but driven by anthropogenic climate change.

This suspicion is not random. A report by Columbia Journalism Review and The Nation, which analyzed US news media, found that despite the amount of climate change-related disasters like Hurricane Maria's devastation of Puerto Rico and flooding in the Midwest, the news rarely mentions climate change (Hertsgaard & Pope, 2019). If this is the case with *Kompas.com*, they need to improve their climate awareness because this journalistic failure will result in public ignorance, enabling politicians and corporations to avoid climate action (Hertsgaard & Pope, 2019). Or, as shared before, another possibility is that *Kompas.com* has not input the "*Perubahan Iklim*" tag in their other possible climate change-related articles, making it unavailable to the list under the "*Perubahan Iklim*" tag.

One interesting finding that may be found in most Indonesian media is the way the news is produced. As can be seen in Figure 7, this research found that most of *Kompas.com*'s climate change articles (68%) in 2020 were not originally created by the journalists of *Kompas.com*. This means that the article's information was quoted from other sources and was paraphrased. The researchers found that *Kompas.com* mainly quotes international news media, journals, and other academic sites. Hence, most of *Kompas.com*'s climate change articles in 2020 are about scientific findings, reports, and surveys.

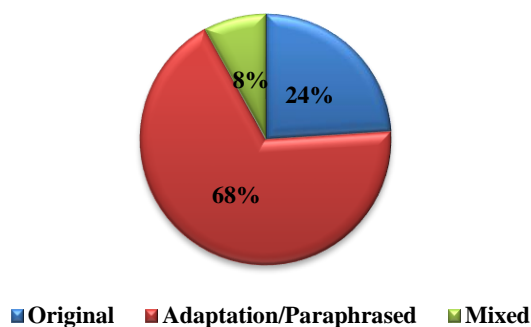


Figure 7. How *Kompas.com*'s climate change articles were produced
Source: Suthor's analysis

This action may not precisely be copy-paste journalism since they would re-write and paraphrase the original information. In Bahasa Indonesia, this journalistic practice is called “*menyadur*”. Future research could be conducted to understand this action and see professional journalists’ or even audiences’ perceptions of this kind of journalistic practice. Does this way of producing the articles affect the quality of its climate change news?

Moving on to the main objective of this research, overall, *Kompas.com*’s climate change articles reported in 2020 are not constructive. All the elements of constructive journalism found in the articles received percentages below 50%. The element with the highest percentage found is *The Rosling* (47%), meaning that they reported climate change with enough data and context to explain the news. They also did a great job incorporating diverse sources and perspectives in their climate change articles. This finding goes against Tiffen et al., ’s (2014) statement, which said that multiple sources often indicate a more active news media where they seek information themselves than relying on limited, privileged sources or reproducing media releases. As shared before, this research found that despite having various sources in their articles, *Kompas.com* did not produce most of their climate change articles in 2020 themselves.

The lowest element found in *Kompas.com*’s climate change articles is the *co-creation* element. This finding relates to other research conducting content analysis using the constructive journalism elements where they found little to no “*co-creation*” element. Hermans & Gyldensted, (2019) shared that it seems like people will only value this element if they feel the positive experience of *co-creation* firsthand. A study found that this element caused a positive impact on news media that applied co-creation into their news production like a more diverse perspective, ability to receive news from various regions, receiving a better understanding of what people need (Hermans & Gyldensted, 2019).

As previously stated in the Introduction section, an article is considered constructive enough if it contains the *solutions* and *inclusiveness and diversity* element, specifically the inclusion of minority and vulnerable groups. Both of those elements had a low percentage. This means that most of *Kompas.com*’s climate change articles did not incorporate the solutions to the problems reported in the articles. A fundamental value in journalism is portraying the world accurately, and that’s only possible if journalists report the “diseases” of the world and the well-being of the world (McIntyre & Gyldensted, 2018). The lack of solutions may also cause readers not to be informed on how to solve it or make it seem like climate change issues are unsolvable.

They could incorporate the positive psychology technique in their writing process. McIntyre & Gyldensted (2018) provided an example: if the topic is about gun control, journalists can write a story about a state or region that successfully managed gun control. Doing this will help inspire other areas that have not succeeded and weaken excuses for failure. Adding the “what now?” question can also be helpful. After figuring out what’s happening and why. The “what now?” question can help journalists find answers to what needs and can be done next to solve the issue?

Some of the findings of this research are similar to Vredenberg’s (2019) findings which found that *BBC*’s climate summit articles contain quotes and statements from various people, often mention the size of the problem but don’t provide detailed information or solutions. In conclusion, *BBC*’s climate summit articles has a lot of negativity and are not constructive. *Kompas.com*, too, offers various perspectives but

most of their articles lack or don't contain information on solutions. Interestingly, a different finding is found in studies that analyze articles regarding COVID-19 using the elements of constructive journalism.

Two studies by Fatima (2020), who analyzed *The New York Times's* COVID-19 articles, and by Dralega & Napakol (2022), who analyzed *The Herald's* COVID-19 articles, found that the *solutions-oriented* element was the most frequently found constructive element. The reason why COVID-19 articles are more constructive may be because of the immediate urgency of the issue that needs solving, with millions of people affected and dying due to the virus in a very short amount of time. Pushing the news media to help the government and scientists share the preventive measures and solutions to dealing with the virus with the public.

An unexpected finding is the lack of the voices or perspectives of minorities or vulnerable groups in *Kompas.com's* climate change articles in 2020. The empowerment of minority and vulnerable groups are essential because when it comes to climate change "victims," they are the most susceptible to the negative impacts. For example, indigenous people are vital to the success of climate mitigation since they have preserved biodiversity for a very long time. However, sadly, they experience a vast scale and scope of threats from climate change (Oelz, Dhir, & Harsdorff, 2017). *Kompas.com*, as a news media with an extensive platform, needs to give minority and vulnerable groups a voice to help with the success of climate mitigation.

To improve their climate change articles, they could provide more solutions and implement positive psychology techniques. Implementing the solutions aspect could make the news less gloomy and educate the public on what they can do and know that climate change is solvable. This is because what is happening right now is that climate-related news is so negative that people think nothing can be done about climate change issues. Another aspect that needs to be improved is the empowerment of the audience, whether it be the general public or minority and vulnerable groups. *Kompas.com* can include more stories relatable to the general public and have the public's voices. This will show that climate change is not just melting icebergs and skinny polar bears but also affecting our daily lives. Showing what the general public does to deal with climate change can inspire other people to do the same. Including the voices of minority and vulnerable groups can help raise attention to the issues they face and highlight the importance of protecting them since they are most susceptible to climate change yet a vital agent of change in mitigating climate change.

It can be said that with the high percentage of the "*The Rosling*" element and the low percentage of the other five elements, *Kompas.com* does not incorporate any special writing techniques or ways when covering about climate change. This is because the main aspect of *The Rosling* is the completeness of the information (5W + 1H) and data, and 5W + 1H is an essential element that must exist in every kind of reporting.

Conclusion

Overall, *Kompas.com's* climate change articles reported in 2020 are not constructive, with low percentages of all the constructive elements, including key elements solutions-oriented, *inclusiveness*, and *diversity*. The constructive element most frequently found in *Kompas.com's* climate change articles in 2020 is *The Rosling* and the least frequently found is *co-creation*. This finding shows that while *Kompas.com* did a good job in providing data and context, they are not solution-oriented and public-oriented, lacking

solutions and empowering the diverse audience. Regardless, there is plenty of room for improvement.

There needs to be more research conducted on journalism. Whether it be content analysis, or audience's or journalists' perspectives on constructive journalism. Doing so can not only find out what journalists feel about a more constructive approach to journalism but also introduce them to the concept. More studies on the audience's perception of constructive journalism are also needed to find similarities and differences in the audience's perception of constructive journalism in different countries. Finding out what audiences prefer and do not prefer in constructive journalism can also help deepen and develop the concept of constructive journalism.

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