

Science Articles in “The Conversation Indonesia”: Identifying Argumentative Patterns and Predicting Their Contribution to Science Journalism in Indonesia

<http://dx.doi.org/10.25008/jkiski.v9i1.973>

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Submitted: March 6, 2024, **Revised:** March 17, 2024, **Accepted:** April 1, 2024

Accredited by Kemdikbudristek No. 152/E/KPT/2023

Abstract - In this paper, the authors investigate argument activities of the journalism of The Conversation Indonesia (TCID). Taking into consideration five elements of argumentation —philosophical component, theoretical component, empirical component, analytical component, and practical component—this study identifying patterns argument that characterize of 41 science articles in 2021 by using qualitative content analysis. To complete the data, we conducted in-depth interviews with the chief of editor/content director of TCID. We also conducted an extensive review of current literature. This paper finds that most of the science articles reported by TCID uses 3 component arguments, namely the philosophical component, the empirical component, and the practical component. This shows that the authors only have a degree of wanting to form knowledge at a moderate level. Other data shows not all writers present predictive arguments in themselves. Only 80% of authors present predictive arguments. We argue that science journalism practiced by TCID is not passionate about building knowledge among its readers. It has not succeeded in promoting Indonesian science journalism as a means of forming readers' knowledge. Therefore, strong efforts are needed to ensure that science journalism can ground research results that shape readers' knowledge.

Keywords: Science journalism, qualitative content analysis, in-depth interview, argumentative patterns, readers' knowledge.

Introduction

Initially journalists and scientists disagreed in their respective ways of reporting on scientific events. The reason is simple, there are striking differences between the reports of journalists and scientists. According to Björn Fjæstad (2008), journalists and scientists look quite differently at what constitutes valuable information. This can be seen through the following matrix:

Scientists	Journalists
Aim: dissemination of research, results, teaching, PR for science	Aim: news, enlightenment, exposure, large audience
Slow information dissemination	Fast dissemination
Factual orientation	Personal orientation
Rational appeal	Emotional appeal
Consensus gives best picture	Diverging voices give best picture
Theoretical relevance important	Practical relevance important

Comprehensive	Selective coverage
Details important	Details unimportant
Results are qualified	Results are overstated
Work judged by colleagues, thus reinforced and reproduced	Work judged by colleagues, thus reinforced and reproduced

The matrix above shows that scientists and journalists have only one feature in common in reporting science events. Both are the same: Work judged by colleagues, thus reinforced and reproduced. Other features, different. The difference stems from the logic attached to their respective jobs.

This discrepancy causes scientists to mistrust journalists' ability to accurately describe scientific findings. They consider science news written by journalists to be incomplete and tends to be sensational. On the other hand, journalists often find scientists uncooperative. They judge scientists are not able to translate their findings into language that is easier to understand. As a result, these two communities do not respect each other. They can't work together.

Luckily, in 2002 the World Federation of Science Journalists (WFSJ) was born in Brazil. The WFSJ's presence eliminated the suspicions and tensions between the journalist community and the scientific community. It wants to advance science journalism as a bridge between science, scientists and the public (WFSJ, 2021). The journalist community and the scientific community can also work together.

In WFSJ, Indonesia is represented by the Society of Indonesian Science Journalists (SISJ). SISJ is a forum between science journalists and scientists to provide scientific literacy to the public and policy makers. SISJ offers science journalism as a solution that takes research out and places it as part of a story (SISJ, 2022).

Meanwhile, it must be admitted, the Indonesian media has long had a scientific rubric. Tempo, for example, has had a science section since 1971. After that, various Indonesian mainstream media followed Tempo's lead. The results can be seen through the following matrix:

No.	Media Name	Rubric Name	Platform
1	CNN Indonesia	Teknologi, Health	cnnindonesia.com (free online)
		Tech News	TV
2	Kompas	Health, Tekno, Sains	kompas.com (free online)
		Iptek, Kesehatan, Riset	Kompas.id (paid online)
		Iptek & Kesehatan	Harian Kompas (print media)
3	TVRI	Indonesia Sehat	TV
4	Detik.com	Detik Health	detik.com (free online)
5	Liputan 6	Sains	liputan 6.com (free online)
6	Tempo	Tekno	tempo.co (free online)
		Sains, Kesehatan, Tekno	Majalah (print media)

Source: Fachrurizal, 2023.

Following the six media above, The Conversation Indonesia (TCID) appeared. It was born in 2016. It is a media that publishes research-based news and analysis in collaboration with academics and journalists (Abrar et.al, 2022). The formation of this organization is inseparable from the commitment to journalistic ethics with the principles of independence, integrity and creativity.

TCID is concerned about access to knowledge owned by the community. It realizes that not everyone can enter university. To guarantee those who cannot enter university but can acquire knowledge, TCID exists. Its presence, said Ika Krismanatari, is to help the community experience the learning process. In more detail he said:

The founder of The Conversation, Andrew Jaspian, thinks there is a deep enough gap between academics and the public to connect with one another. So The Conversation is expected to be a bridge that brings the spirit of knowledge to be able to access the widest possible information. The Conversation presents

content based on the principles of a journalist's writing style through credible research stages, (interview, Jakarta, 12 August 2022).

Andrew Jaspan is a (British Australian) journalist since 1977. During his time as a journalist, he has often been a guest lecturer at various universities. By looking at it, he imagines that the university is the same as the work editorial room where the entire academic community already has a job (job-desk) and each other's responsibilities for the sake of alignment of goals. That's when Jaspan thought that the way the university works is also the same as the concept of journalists. Each faculty can be empowered with functions that everyone can accept like a newsroom that has a purpose for align writing to become a unified article that supports development knowledge.

TCID's determination above indicates the creation of change and transformation of values in science journalism. What does change and transformation look like? This article will discuss the answer.

Theoretical Framework

Science journalism, according to Summ & Volpers (2016), can be seen from two sides, narrow and broad. In the narrow sense, it reports on research findings, research projects and scientific conferences. It is largely determined by the expertise of experts. However, in a broad sense, it covers all issues of everyday phenomena in non-scientific fields from a scientific perspective. It refers to the opinion of scientists by citing scientific studies. In this study, science journalism refers to a narrow sense, namely reports on research results, research projects and scientific conferences.

Of course, this understanding is not enough to determine the object of science journalism research. Then what is the main object of science journalism. According to Al-Elah & Al-Saraj (2021), scientific journalism research objects include: scientific research articles, research abstract articles, discussion results of scientific seminars and forums, history of science stories, findings reports on patents, science stories, and reports of various topic from a scientific perspective.

At this point, the question arises how does TCID report on science? Borrowing the opinion of Secko et al., (2013), the goals of science journalism cannot be separated from the goals of science communication. This goal can be classified into two, traditional and contemporary. Traditional goals mean increasing public understanding of science. Contemporary aims aim to explore the interaction of the public and science. Seeing the coverage that TCID has done so far, he tends to choose the first objective, which is to increase public understanding of science.

In reporting science news, TCID uses language. According to Kasdin Sihotang (2018), language has four functions, namely communicative, descriptive, expressive, and ontological. However, in this study, the authors choose the descriptive function, to ensure written material can be recognized properly and correctly. "This descriptive function is seen and the conditions that must be met in its use, namely clarity, accuracy and objectivity." (Sihotang, 2018, p. 179).

The selection of language descriptive functions is commonly used in scientific languages. This descriptive function, said Liek Wilardjo (1990), is the delivery of ideas in a complete, precise, clear, concise, systematic, and unified manner. "The salient feature of this paper is argumentation (1990, p. 43).

Indeed, TCID readers are ordinary readers, who do not fully understand the problems presented by the author. However, as stated above, the writing is directed at increasing public understanding of science. If this has been achieved, of course the community's science literacy can increase. This increase in science literacy is what the authors envision as the long-term goal of reporting the results of TCID's research. Whether or not this goal is achieved is also determined by the quality of Indonesian science journalism and TCID's journalism.

The level of science literacy of the Indonesian people is of course in accordance with their level of education. However, as written by Bambang Suhendro (2006), people's life experiences, including their media habits can increase their level of science literacy. At this point, reviewing TCID's performance in reporting its articles can be called our contribution to helping increase the level of science literacy of the Indonesian people in the future.

The problem is, what is the level of TCID compliance in presenting articles that present reasonable arguments? This problem can be continued to be, what is the argumentation pattern of the

articles reported by TCID? Are there any predicting arguments that come out as an outcome of TCID? This answer will be presented by this article based on research results.

Material and Methodology

This research uses a qualitative approach by combining two research methods. The first research method is content analysis. Content analysis is a scientific method for analysing text and content. Krippendorff explain that content analysis is a research technique for making replicable and valid inferences from text (or other meaningful matter) to the context of their use (Krippendorff 2018, p. 24). Hsieh and Shannon (2005) summarizes the opinions of several researchers including Cavanagh (1997), Rosengren (1981) and Weber (1990), concluding that content analysis is a method of text analysis that can be applied through several approaches such as impressionistic, intuitive, interpretive to textual analysis (Hsieh and Shannon 2005, p.1277).

However, apart from the debate about content analysis, the development of this method eventually led to a fork in terms of analytical techniques. The first perspective focuses on the use of numbers and analyses the text manifestly. This perspective eventually became popular with quantitative content analysis. Meanwhile, the second perspective explains that content analysis can reach the interpretation, meaning and context of a text. This second perspective produces a qualitative content analysis technique. This research takes the second path, qualitative content analysis.

Qualitative content analysis is a powerful method for analysing large amounts of qualitative data collected through interviews or focus groups (Schreier 2012, p. 12). More specifically, this research uses a summative content analysis approach. Summative content analysis is one of the approaches in the content analysis method. As an approach, summative content analysis is interpreted as an analytical technique that identifies and measures specific words or content in a text with a purpose understand the contextual use of words or content (Hsieh and Shannon 2005, p. 1283).

The second method is depth-interview. We made observations of TCID because of this media concern in publishing research results in the form of popular publications. TCID is the leading online media platform that proclaims the importance of science publications. Coverage about science is commonplace in various media on various platforms. However, TCID requires that published content is the result of research and is written by researchers who collaborate with TCID journalists. This criterion makes the content managed by TCID very specific and different from science coverage in other media in Indonesia.

Data Collection Technique

The process of identifying argumentative patterns and predicting argument outcomes Science Journalism in Indonesia based on a collection of TCID science articles for December 2021. We collect science articles through keyword-based searches. The collected articles were then selected based on two indicators, first, published articles were the result of research and the second, were written by lecturers cum researches or researchers.

Based on keyword searches and article selection, 41 articles were produced that were worthy of research. The scientific article is the object of research in this research.

This data is then complemented by the results of in-depth interviews with the person in charge of TCID

Data Processing Strategy

The primary data for this research is a collection of scientific articles and interviews with TCID. The first step, the researcher mapped the structure of science articles based on the systematics of academic writing. In standard academic rules, the structure of writing consists of an introduction, body article and conclusions (Bruno et al 2020, p. 57-63). After mapping the structure of the article, the researcher observes the construction of each paragraph of the articles. In the introductory part, the main objectives are based on 4 indicators (Bruno 2020, p. 31): (1) Introduce the issue; (2) Present the topic and its explanation or clarification; (3) Provide the categories used to explain the topic; (4) Provide the thesis statement.

The next observations were made on the body of the article. In this section, the indicators that become a reference are (Bruno 2020, p. 33): (1) Reflecting the argument of the thesis statement; (2) Support the argument with useful and informative quotes from sources such as books, journal articles

and expert opinions; (3) Explanation of each quote and indicate; (4) Transition into the next body sentence.

The last observation was made in the conclusion section through 3 indicators (Bruno 2020, p.35): (1) Reflecting the argument of the thesis statement; (2) Summarize the main points of the paragraph; (3) Strong and effective close for the paragraph.

The second step, the researcher examines the pattern of arguments contained in the body of the article. This research uses van Eemeren's point of view in analysing argument patterns. According to van Eemeren (2014, p. 10) there are five indicators for assessing argument patterns which can be seen in the following table:

Table 1. Indicator of argument patterns

Indicator	Information
Philosophical component	Reasonableness conception
Theoretical component	Model of argumentation
Empirical component	Factors and processes determining argumentative reality
Analytical component	Systematic reconstruction of argumentative discourse
Practical component	Improvement of argumentative practices and skills)

To obtain confirmation of the above data, we conducted an in-depth interview with the chief of editor/content director of TCID, Ina Krismanatari. This data is also used to complement the data obtained from the scientific articles studied.

Results and Discussion

Author Attribute

As mentioned above, research was conducted on 41 articles reported by TCID during December 2021. Lecturer cum researchers are the most authors, 27 articles (66%). The second most authors are researchers, 7 articles (17%). The third most authors are PhD students, 5 articles (12%). The remaining 2 articles (5%) were written by the editor of TCID. This data is presented in the following table:

Table 2. Author Attribute

No.	Author Attribute	Frequency	Precent
1	Lecturer cum Researcher	27	66
2	Researcher	7	17
3	Ph D student	5	12
4	Editor of TCID	2	5
	Total	41	100

This data shows that most of the articles are written by experts in their fields. The contents of the articles written have gone through a long process, starting from research, writing reports and writing articles. The contents are the knowledge of science that is owned by the author. They write articles with the hope that they can shape the knowledge of their readers.

The data above shows that lecturer cum researcher wrote 27 articles (66%). Lecturers live in a world of knowledge that sometimes changes very quickly. They must continuously improve themselves, adapt their knowledge and abilities to the latest conditions. For that, they have to do research. Research begins with the problem they find or create and ends with publication. When they want to publish their research results, they can send their research results to scientific journals or media such as TCID. They have carried out their obligations according to their role. Therefore, the articles they produce are worth reading and used as a signal to regulate their behaviour.

The data above shows that the researcher wrote 7 articles (17%). Research, according to Teuku Jacob (2006), is the lifeblood or soul of a researcher. A researcher tries to solve problems that arise in society, nature, the world of science and those he/she creates himself/herself. He/she is very passionate about solving the problem. The effort did not stop until the research was completed. He/she will publish it. From the publication, he/she obtained satisfaction, comfort and relief. So, this data can be read as: they deserve to be trusted want to ground their research results.

The data above also shows that PhD students wrote 5 articles (12%). For them, it seems that this publication is a way of giving back to other experts, including their supervisors. From these publications, readers get new views and inspiration to live their lives. So authors and readers both benefit.

There are two articles (5%) written by TCID editors. They are not experts in science. However, these two articles also depart from their observations. They study the problems they write to fit scientific techniques. They then present it according to TCID's editorial policies.

Quality of the Article Argument

Basically every author is always encouraged to hold the right attitude in writing. He felt that the message to be conveyed through the article had to be acceptable to the readers. He/she will evaluate carefully, carefully by issuing his/her cognitive efforts to the fullest. He/she tried to keep the risk of error as small as possible.

Theoretically, said Sri Hartati (2005), the quality of the argument determines the message content of the article. Indeed, strong and weak arguments will be digested by the article's readers. However, strong articles will foster a favourable attitude towards the contents of the writing. It will determine whether the writing will continue to be read or abandoned.

The problem is, how is the quality of the arguments of the 41 articles reported during 2021? The quality of the article's argument, as mentioned above, uses five indicators, namely: (i) a philosophical component, (ii) a theoretical component, (iii) an empirical component, (iv) an analytical component, and (v) a practical component. These five types of arguments are identified in each article.

The number of component arguments contained in an article determines its attitude towards the reader of the writing. The more the number of argument components, the greater the desire of the author to shape the reader's knowledge. From here, the authors divide the level of desire to form the knowledge into: 1 argument component = very low, 2 argument components = low, 3 argument components = moderate, 4 argument components = high, and 5 argument components = very high. Based on this level of desire, a gradation table of the degree of desire of the article writer is obtained in forming the reader's knowledge as follows:

Table 3. Gradations of Desire Degree of Article Authors in Shaping Knowledge Readers

The situation	The Number of Component Argument	Author Desire Degree	Frequency	Percent
1	5 component arguments	Very High	4	10
2	4 component arguments	High	13	31
3	3 component arguments	Moderate	19	46
4	2 component arguments	Low	3	7
5	1 component argument	Very Low	2	5

The data above shows that 19 articles (46%) have a moderate degree of likelihood to shape the reader's knowledge. These articles have 3 component arguments. When viewed further, the dominant component of the argument is the philosophical component, the empirical component, and the practical component. It shows the author of these articles presenting an argument. readers need to enjoy the article. This pleasure is the beginning of the reader to understand the contents of the article.

The data above also shows that 13 articles (31%) have a relatively high degree of desire. These articles, besides having a philosophical component, an empirical component, and a practical component, also have an analytical component. This shows that the author of the article already has a precise strategy so that the readers of the article can form knowledge from the articles they read.

The data above also shows 4 articles (10%) which have a very high degree of desire. These articles have all argument components, namely: philosophical component, empirical component, practical component, analytical component, and theoretical components. They are perfect articles for creating knowledge among readers. It is not easy to present these five component arguments in an article. However, in order to create complete knowledge among readers, the author of the article is willing to do it.

The data also found that only 3 articles (7%) had a relatively low degree of desire. These three articles have 2 component arguments, namely the theoretical component and the practical argument.

Data was also found, only 2 articles (5%) had a very low degree. Both of these articles have only one component argument, namely the theoretical argument. This is quite feasible for writing a research article based on research results.

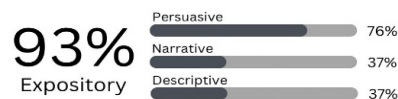
Way of Presenting Argument

In fact, each article writer is free to present the arguments presented in the article. At the same time, he is also free to determine the number of arguments presented in his article. However, theoretically there are four types of ways of presenting the argument, namely: descriptive, persuasive, narrative and expository. Descriptive way can be said to present arguments through vivid language and explain in full. The persuasive way is trying to convince their audience to adopt a new idea. The narrative way describes the argument coherently. Whereas the Expository way explains arguments accompanied by proper reasons (abstracted from Bruno et al 2020, pp. 25-39).

The difference in the way of presenting the argument is a manifestation of the attachment of the article writer to the reader. The author of the article tries to carefully imagine the habits of readers in reading research articles. It is from that imagination that he decides how to present the argument (Petty and Cacioppo, 1984). As a consequence, we feel the need to look at the way the arguments are presented in each article that we examine.

How to present arguments in researched articles is shown in the following Figure 1:

Figure 1. The Way of Presenting Argument



*based on the 41 collections of The Conversation Indonesia science articles for December 2021

How to read the data above? As previously mentioned, the number of component arguments in one article can vary. Some have one component argument, some have two component arguments and so on. The number of ways of presentation also varies. So we only calculate the presentation of the way all component arguments are presented.

The figure above shows how the expository presentation ranks first. The percentage reaches 93%. This shows the authors explain arguments accompanied by proper reasons. They try to make sure that the argument is reasonable and acceptable. That way, they hope that the argument can be well received. This method is a typical method used in universities.

The figure above also shows that persuasive presentation ranks second, 76%. In this way of presentation, the author of the article persuades the reader to accept his argument.

The figure above mentions only 37% of how to present narrative arguments. Even though this way of presenting includes the way of presentation that is usually done by the media. He explains the argument by telling a story.

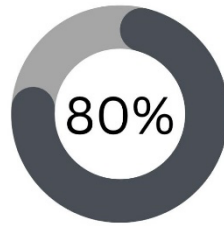
It can also be mentioned how the presentation of descriptive arguments is also 37%. The presentation is the same as the presentation of narrative. This way of presenting bombards the reader with the clearest explanation possible.

Predicting argument

In the life of researchers, there are facts that may have big consequences if they are not resolved. There are realities that do require interdisciplinary handling. Whether we realize it or not, there needs to be follow-up to solve it. However, the follow-up was based on a strong argument. This argument is often called a predictive argument.

Predictive argument can be seen as the author's complete attention to the problem written. However, on the other hand, the complete content of the article forms the motivation of the reader to make the contents of the article as knowledge. So it is necessary to see how many researched articles contain predictive arguments. This explanation can be seen in the following Figure 2:

Figure 2. Prediction arguments in The Conversation Indonesia



*based on the 41 collections of The Conversation Indonesia science articles for December 2021

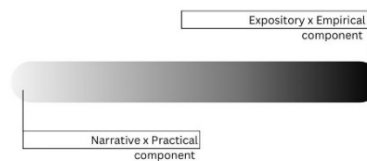
The figure above shows the number of predictive arguments presented in the researched articles. The amount reaches 80%. However, the location is not always at the end of the article. There are also those located at the beginning of the article.

Spectrum Argument

Each argument has a unique meaning. The meaning is different from one another. However, in an article, there are arguments that intersect with other arguments. To see this slice, we present it as a line that describes the spectrum of the argument.

The spectrum of these arguments can be seen in the following Figure 3:

Figure 3. Spectrum Argument in The Conversation Indonesia



*based on the 41 collections of The Conversation Indonesia science articles for December 2021

This figure describes the spectrum of arguments in TCID articles. The argument spectrum is useful for viewing the trend of the color state of the argument. The data shows that the right side is the color of the argument that is most used, namely the expository and empirical components contained in 32 articles. While on the left side are the color arguments that are rarely used, namely narrative and practical components which are only contained in 1 article. Based on the spectrum of these arguments, it's known that in TCID articles, there is a set of argument characteristics that intersect with argument patterns. The data shows that expository argument intersects with empirical components and narrative argument intersects with practical components.

Each of them, both from the characteristics and the patterns of argument has interrelated judgments based on the theoretical concept. In addition, the expository argument will provide an effective explanation (Brooks, 2020, 29), also the framework to support the clarification of the topic (Brooks, 2020, 30) in the article's paragraph, and likewise the empirical component, which uses a factors and processes (Eemeren et al., 2014, 10) approach in determining the argumentative reality in the article's paragraph. Similarly, narrative argument demonstrates the development of the chronological event and creates a sense of personal growth (Brooks, 2020, 25), such as how a person learned from that experience in the article's paragraph, whilst practical argument develops instruments for improving the practices and skills in argumentative discourse (Eemeren et al., 2014, 11) in the article's paragraph.

Discussion

Research results reported by researchers at TCID in written form. Writing, said Budi Darma, is a source of learning for the next generation. Without writing, culture will not progress (In Gusnadia, 2016: 156). Maybe Budi Darma is exaggerating. But what we want to remind here is how important the importance of writing is.

Great attention to writing will replace orality. Oralism here is by the way, gossip is not a discussion. Also laziness to face problems. Maybe some of us will say the problem is not writing, but trusting writing. This means that great interest must be accompanied by the trust of the readers of the writing.

Under these conditions, the media that reports science articles also face such a challenge. Does the reader believe the writing? If the answer is positive, of course they will continue reading the science article. By continuing to read, we can hope that they will have knowledge of what they read.

The problem then is, where to start to build that trust. The first, of course, from the author. So the first question that needs to be answered is, who is the author of the science article? Table 5 shows that only four authors of science articles reported by TCID, namely lecturer cum, lecturer, Ph D Student researcher and editor of TCID. They can be called a person who can be trusted. This can be seen as TCID's seriousness to report science articles that can shape readers' knowledge.

If the author can be trusted, of course the second question that needs to be answered is what is the pattern of argument presented in the article? Table 6 shows the pattern of the arguments starting from the most 3 component arguments (19 articles-46%). Of the three component arguments, what always appears are philosophical arguments and practical arguments. Other argument components appear alternately, namely empirical arguments, analytical arguments and theoretical arguments. This fact implies that the knowledge conveyed by the author of the article is scientific knowledge. This knowledge, according to Sihotang (2018) is the second stage of intellectual knowledge.

At this point the question naturally arises, what is intellectual knowledge? Borrowing the opinion of Sihotang (2018), intellectual knowledge is the result of reason activity. These are generally accepted concepts. It is also a product of abstraction towards objects captured by the five senses. Furthermore he said, "in the working mechanism of intellectual knowledge involves five elements of intelligence in humans, namely common sense, fantasy, memory, estimation ability and cognition (Sihotang, 2018, p. 104).

In a further statement, Sihotang divides intellectual knowledge into three levels, namely common sense, scientific knowledge, and philosophical knowledge (Sihotang, 2018, pp. 106-108). This paper does not look at the kind of intellectual knowledge formed by the research articles. What is clear is that the knowledge that is formed is intellectual knowledge.

Another argument pattern is, 4 component arguments. This pattern is ranked second (13 articles-31%). The four component arguments include: philosophical component, empirical component, and practical component, and analytical component. This pattern can represent the passion of the writer of the researched article to create knowledge among his readers.

Actually, writing is a passion. That passion is represented by the degree of the author's desire to shape the reader's knowledge. Table 6 shows that level. The most common ones were moderate (19 articles-46%). However, this already shows TCID's great concern for building the knowledge of readers of researched articles.

Our attention to Figure 1 may show a way of presenting arguments that is inappropriate for media journalism. It is not the expository way of presentation for the academic environment. What is suitable for media journalism is of course the way of presenting narrative. Tim Radford (former science editor, *The Guardian*) identifies a crucial tension in the focus of the mass media—particularly newspapers—on seeking a good narrative rather than seeking to advance public education as scientists sometimes seem to expect (Bucchi, 2007). Data shows only 37% articles identified presenting arguments in narrative. In addition, data in previous study shows 63% of articles reported by TCID using scientific language (Abrar et.al, 2022). This indicates that TCID has not provided information that can be understood by the general people.

Our attention to Figure 2 also shows the weaknesses of the researched articles. Not all articles present prediction arguments. This situation can be seen in TCID's negligence in deciding which articles should be reported. At the same time he can be considered forgetful to think what will happen to the reader's mind.

However, Figure 3 shows how to present expository intersections with empirical components and how to present narrative intersections with practical components. Readers will also find enjoyment in reading well-researched articles. They will continue to evaluate the contents of the articles that reach them.

Above all, according to Ika Krismantari's confession, TCID is the pioneer of a quality journalism system even though it has to sacrifice the reporting timeline. This is because TCID news publication and analysis requires collaboration from academics and editors on independent, quality and reliable journalism practices through TCID's editorial supervision protocol in the principles of democracy for the benefit of public information flow (interview, Jakarta, August 12, 2022).

The importance of quality and reliable science journalism practices for the development of Indonesian society can be seen at two interrelated levels, namely collective and individual. According to Ashadi Siregar (2010), at the collective level, readers really like descriptive reporting processes. However, at the level of individual personality, narrative meaning is appropriate for Indonesian readers (p. 68). This shows that collectively, Indonesian people like descriptive arguments. However, individually, they like narrative arguments.

Conclusions

Based on the authors' analysis of 41 research articles published by TCID in 2021 publication, depth-interviews with the chief of editor/content director of TCID, and analysis of the macro context of Indonesian journalism, the authors can convey the following conclusions:

This paper finds that all the authors of the researched articles were experts in their fields. Their writing deserves to be read and enjoyed. This is of course encouraging for TCID.

This paper highlights that not all authors of researched articles have a great degree of desire to shape knowledge among readers. The highest degree of desire is at a moderate level. This can be read as TCID's failure to ground scientific research results.

This paper shows that not all researched articles contain prediction arguments. This really disturbs the seriousness of the reader in forming his knowledge. Audience knowledge will be more complete if they understand the prediction arguments in the articles they read. This shows that TCID hasn't really wanted to realize its credo.

This paper shows that most of the ways in which arguments are presented are expository. This way of presentation is not compatible with the way of presentation practiced by journalism. Doesn't TCID understand that the way of presenting narrative is the way of presentation used by journalism.

This paper finally demonstrates that TCID has not fully succeeded in realizing itself as is the pioneer of a quality science journalism. He still needs to improve to be able to produce research articles that are able to shape readers' knowledge.

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