Theme Structure in an Introduction Section of Articles Published in Indonesian National Journals

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Abstract

One of the important parts of a research article is an introduction. As the initial part of an article, it should provide all the ideas confirming that the study needs to be conducted. Therefore, the ideas presented should be well organized. One of the ways to confirm a good organization of ideas in the introduction is by paying attention to the theme structure used to build the clauses. This study analyzed the theme types and structure used in the introduction section of articles published in Indonesian national journals. This study was conducted using qualitative content analysis. Using a documentation technique, the data were collected from 15 research articles published in the latest volumes (2020-2021) of four Indonesian national journals. The data were analyzed using a content analysis method, following the established procedure of the clause theme analysis. The results of the study found the dominant use of simple themes in the introduction section of the research articles, indicating a lack of ideas organization. Besides, it was also found that the theme structure of the clauses was realized in nine theme patterns. These patterns are used in presenting different contents of an introduction. It is concluded that theme

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types and patterns contribute to producing a good quality introduction section of a research article.

1.   INTRODUCTION

A scientific article (research article) is one of the most current sources of information in the world of science. Writing a research article requires specific language skills in conveying information in appropriate and easy-to-understand language, reflected in a well-organized text. One of the ways to achieve such a purpose is by paying attention to the textual function realized in the text. The textual function is among the so-called three language metafunctions – ideational, interpersonal, and textual – proposed by Halliday (1994). The textual metafunction focuses on how ideas are arranged. It enables the clause to be packaged effectively by considering its purpose and context (Eggins, 2004). It has been mentioned in the existing literature that textual metafunction is realized in theme and rheme (Eggins, 2004; Halliday, 1994; Martin et al., 1997). Thus, based on the textual function, every clause is composed of a theme (the first element of a clause that informs what the clause is going to be about) and rheme (the rest element(s) of a clause in which the theme is developed).

The theme-rheme structure has attracted many researchers to conduct studies on it. Several previous studies have investigated the role of thematic progression in building text cohesiveness (Herriman, 2011; Keskin & Demir, 2021; Rosa, 2007a), theme characteristics in different text types as in recounts (Yunita, 2018), narratives (Nurlela et al., 2021), descriptives (Pangestu et al., 2019), descriptions and explanations (Az-Zhahir et al., 2020), and discussions (Anwar & Amri, 2020; Putri & Rosa, 2020), the theme structure in newspaper editorials (Rosa, 2007b), and the use of themes in translation studies (Dejica-Cartis & Cozma, 2013; Esfehani & Walters, 2018; Ethelb, 2019; Rosa & Sofyan, 2019). The results of those previous studies have confirmed that different texts may have different theme structures. Rosa (2007a), for example, found that the simple linear progression is the thematic progression structure most frequently used in exposition texts written by Indonesian students. In contrast, Keskin and Demir (2021) found that the constant continuous theme was the most frequent structure of thematic progressions used in the argumentative essays written by Turkish students. Furthermore, Yunita (2018) and Nurlela et al. (2021) found that the unmarked topical theme was the most frequent theme structure used in recount text. However, in newspaper editorials, the marked theme was most frequently used when showing their disagreement with the reported issues (Rosa, 2007b). Those previous studies left the gap that can be completed by this present study, particularly in the types of texts (i.e., academic texts, genre-based texts, editorials, and translated texts) used as the study object. Thus, the theme-rheme structure can be studied in other text types, one of which is a scientific text.

This present study explores the theme structure in the scientific articles published in Indonesian national journals. As the media for scientific knowledge sharing, journal articles should contain well-organized ideas that facilitate readers' understanding of

the shared knowledge. As suggested by the previous studies, the theme structure has been examined to have contributed to the organization of a text. Thus, the theme structure in journal articles is worth studying.

One of the most important parts of an article is an introduction in which the reason why a certain study needs to be conducted is described. Besides, an introduction explicitly introduces the novelty proposed in the article. In addition, an introduction is considered a point of reference for readers to decide whether or not to read the article (Lang, 2017). Based on the writers' observation, many articles need resubmission or are even rejected to be published in international journals because of their poor introduction section. In the reviewers' comments, one of the factors leading to such rejection is disorganized ideas that lead to difficulty in understanding the messages contained in the introduction section, one of which is caused by poor theme structure. Therefore, studying an introduction of a scientific article is important as an effort to improve the organization of ideas presented. This study takes an introduction as the research object. In particular, this study answers the following research questions:
1. What type of theme is dominant in the introduction of articles published in Indonesian national journals?
2. How is the theme structure used in the introduction of articles published in Indonesian national journals?

2. LITERATURE REVIEW

2.1 Introduction Section of Research Articles

One of the suggested formats for writing a research article is IMRaD (Introduction, Methods, Results, and Discussion) structure. Previous studies have confirmed that IMRaD was the most frequently used structure in published research articles because it eliminates unnecessary details to facilitate readers' understanding of the presented ideas (Sollaci & Pereira, 2004; Thi Trinh et al., 2020; Wu, 2011). IMRaD guides the writer in addressing the questions essential to understanding a scientific study (Wu, 2011).

In the IMRaD structure, an introduction section plays an essential role in achieving the writer's intention of writing an article. It serves as the foundation for a research article (Bavdekar, 2015; Branson, 2004). The introduction contains a short review of knowledge, which presents the gaps in knowledge to be completed by the present study (Teodosiu, 2019). It provides the reason why the present study needs to be carried out (Nair & Nair, 2014). From the readers' point of view, an introduction explains why they need to read the article or why they should care about it. The ideas above indicate the essential role of the introduction in writing a research article. The introduction is even considered the tool to 'sell' the study to the editors and reviewers (Bavdekar, 2015).

In terms of its format, researchers suggest that an introduction section should be short (Branson, 2004; Teodosiu, 2019) or brief (Nair & Nair, 2014) because it only contains three components: scope, novelty, and significance/purpose (Bavdekar, 2015; Branson, 2004; Mack, 2018; Shah, 2015). This has been confirmed by Zein et al. (2020), who found that a very long introduction leads to the complexity of the ideas presented. In the introduction section, authors are not suggested to write long, heavily

referenced introductions or to provide an extensive literature review, even though some journals want the related literature to be discussed in the introduction section.

In order to make it easy to read and understand, the introduction section should be written cohesively. The main point of every clause and the interaction between clauses in the introduction should be clearly presented and well organized. Such clarity can be explored from the theme structure used in every clause. The quality of the introduction of an article, especially viewed from its theme structure, will influence the readers' interest in reading the article.

2.2 Theme Structure

The theme is the term introduced in Hallidayan systemic functional linguistics to refer to the first element of a clause (Halliday, 1994). The theme identification based on the position of clause element has been confirmed to be applicable in many languages (Eggins, 2004; Lavid et al., 2010; Martin et al., 1997; Refnaldi & Rosa, 2016). As the first element of a clause, the theme informs what the clause will be about (Halliday, 1994), influencing the rest of the message in a clause (Nurlela et al., 2021). These ideas suggest that the themes of every clause affect the organization of the ideas presented in a text. The remaining message of a clause is called rheme, the place in which the theme is developed (Refnaldi & Rosa, 2016).

The theme is both a simple theme (composed of one theme) and multiple themes (composed of several themes or several types of themes) (Halliday, 1994). The types of themes include ideational or topical, interpersonal, and textual themes (Eggins, 2004; Halliday, 1994). The clauses in (a) and (b) are examples of clauses with simple and multiple themes.

(a)   The man bought an apple
(b)   Hi Santi, I'm Jack

The clause in (a) is composed of only one theme, 'The man', the element of a topical theme. Meanwhile, the clause in (b) is composed of two themes. The first theme is 'Hi Santi', the element of an interpersonal theme which is represented by a vocative. The second theme is 'I', the element of a topical theme.

The topical theme is presented by transitivity elements, including participants (realized by a nominal group, e.g., 'Jack', 'an apple', 'the man in a red jacket'), processes (verbal group, e.g., 'walk', 'feel', 'become', 'smile', 'have', 'exist'), and circumstances (adverbial group, e.g., 'yesterday', 'for three years', 'at school', 'according to Brown'). The interpersonal theme is composed of vocatives (a word or a phrase used to address someone or attract their attention, e.g., 'Sir', 'Darling', 'Hi Santi'), modal adjuncts (e.g., 'might', 'can', 'should'), mood marking elements (words indicating probability, usuality, polarity), finite (verbs that are marked for tense and modality, e.g., 'do', 'have', 'may'), and W-H interrogatives. The textual theme is composed of continuatives (e.g., 'uh', 'well', 'yeah'), conjunctions or structural elements (e.g., 'but', 'and', 'or'), conjunctive adjuncts (e.g., 'because', 'although', 'while'), and W-H relatives (e.g., 'who', 'which', 'that'). A topical theme is obligatory among the three types of themes but cannot appear twice in a clause. Meanwhile, interpersonal and textual themes are used only in multiple themes, but they may appear more than once in a clause (Refnaldi & Rosa, 2016).

Previous studies have confirmed the contribution of theme structure in composing a well-organized text. Rosa (2007b), Yunita (2018), and Nurlela et al. (2021) found the contribution of theme markedness in presenting ideas in a text. Rosa (2007a), Herriman (2011), and Keskin and Demir (2021) have examined the contribution of thematic progression structure in building the ideas' cohesiveness in a text. Anwar and Amri (2020) and Putri and Rosa (2020) have confirmed the contribution of theme patterns in organizing ideas in a text. The results of these studies indicate the need of paying attention to the theme structure in developing and organizing ideas to produce a well-organized text.

3. METHODS

This study was conducted using a qualitative approach, employing content analysis as the research method. A qualitative content analysis represents a systematic and objective means of describing and quantifying phenomena (Schreier, 2012). This study used this method to describe and quantify the use of themes in research articles. The data were all clauses in the articles published in Indonesian national journals. The data source was 15 articles published in four national journals focusing on social humanities studies.

The first journal, the *Indonesian Journal of Medical Anthropology* (https://talenta.usu.ac.id/ijma), was selected because the focus of the journal was considered unique as it addressed the issues of medicine in relation to cultural values and beliefs that might contribute to the different use of the theme types. The second journal was *LingPoet: Journal of Linguistics and Literary Research* (https://talenta.usu.ac.id/lingpoet), focusing on the issues in linguistics, applied linguistics, modern and contemporary literature, and comparative literature. The third journal was *the International Journal of Culture and Art Studies* (https://talenta.usu.ac.id/ijcas), publishing articles that addressed the issues related to culture, language, and literature viewed from the Indonesian perspective. The fourth journal was *Intellectual Property Rights Review* (https://talenta.usu.ac.id/iprreview). The scope of the journal was unique as it addressed the issues related to intellectual property rights. The general reasons for selecting the journals were: (i) they were relatively new journals, as most of them published their first issue in 2020; (ii) all the articles published in these journals were written in English; (iii) all the journals administered blind review process; and (iv) all the articles in these journals are written in the IMRaD structure.

The data were collected using a documentation method. The four selected journals published articles twice a year (biannually). Therefore, the journals published four editions, each containing six articles. The researchers randomly collected one article from the latest volumes (2020 and 2021) from each journal. Hence, the total number of articles collected was 16 (4 articles from each journal). The use of random sampling was motivated by the fact that all the published articles had undergone a blind review process, so the articles were assumed to have the same quality. However, one article was removed because it was not written using the IMRaD structure. Therefore, 15 articles were collected as the data source. Then, the introduction section of the articles was taken as the object of the analysis.

The data were analyzed using a content analysis method, following the procedure of theme-rheme analysis suggested by previous researchers (Vaismoradi & Snelgrove, 2019; Vaismoradi et al., 2013). First, the introduction section was broken down into clauses. Each clause was identified based on its process element in this step. Then, the themes of the clauses were identified and analyzed to obtain the components of the themes. This was particularly important in distinguishing simple themes from multiple themes. As Nurlela et al. (2021) suggested, meaning elicitation was needed to identify the function of each theme component in the clauses. Finally, the findings comprising the dominant type of theme and the structure of the theme used in the articles were formulated.

4.   RESULTS AND DISCUSSION

4.1   Dominant Themes in the Introduction of Research Articles

The data analysis results indicate that simple themes dominate the themes used in the research articles published in Indonesian national journals. This is indicated by the frequent use of topical themes, as shown in Table 1.

Table 1. Types of themes used in the research articles

Text	Topical			Interpersonal				Textual			
	Part	**Pro**	**Circ**	**Voc**	**Mood**	**WH-i**	**Fin**	**Str**	**Conj**	**Cont**	**WH-r**
1	39	0	3	0	4	1	0	4	10	0	4
2	81	0	7	0	5	0	0	12	12	0	20
3	33	0	2	0	5	0	0	1	6	0	6
4	64	0	22	0	5	0	0	7	18	0	19
5	53	0	1	0	0	5	0	6	7	0	4
6	15	0	7	0	1	0	2	1	5	4	3
7	24	0	3	0	1	0	0	1	2	2	5
8	40	1	6	0	1	0	0	6	12	0	5
9	35	0	7	0	8	0	0	4	8	2	4
10	64	2	12	0	1	1	0	2	21	1	12
11	40	0	11	0	1	0	0	4	10	2	6
12	19	0	0	0	2	0	0	1	1	2	4
13	54	0	15	0	1	0	0	5	24	0	3
14	45	0	11	0	7	2	2	15	15	2	5
15	17	0	1	0	0	0	0	1	3	0	2
Total	623	3	108	0	42	9	4	70	154	15	102
%	84.9	0.4	14.7	0	76.4	16.4	7.3	20.5	45.2	4.4	29.9
Total	734 (65%)			55 (5%)				341 (30%)			

Notes:
Part = Participant
Pro = Process
Circ = Circumstance
Voc = Vocative
WH-i = WH-interrogative
Fin = Finite
Str = Structure element
Conj = Conjunctive adjunct
Cont = Continuative
WH-r = WH-relative

As mentioned in the previous literature, a simple theme only uses a topical theme as the clause theme. The results displayed in Table 1 show that the number of topical themes (65%) used in all the introductions of the articles is much greater than interpersonal (5%) and textual themes (30%). This indicates that the writers emphasize the topic of the message or information sharing rather than showing the interrelationship among the clauses. They focus on 'who or what (participant)', 'what (process)', and 'where, when, why, which, and how (circumstance)'. Although these are pieces of information needed to be shared with the readers, the lack of showing the interrelationship among the clauses makes the introduction difficult to read and understand. In other words, the ideas presented in the introduction section of the articles in the four national journals focusing on social humanities studies lack cohesiveness. Several previous studies have confirmed that textual themes are obviously needed to show a good organization of clauses in a text (Nurlela et al., 2021; Rosa, 2007a; Wang, 2007).

Nevertheless, the less frequent use of interpersonal themes in the introduction section confirms that the ideas presented are factual. This is in line with the previous studies' suggestions that a good introduction contains important 'findings and conclusions of the previously published studies' (Bavdekar, 2015) that the writers know. This knowledge helps the writers formulate the research gap.

Moreover, the results show that the interpersonal themes used in the introduction section mostly present the research questions using finite or W-H interrogatives. Some examples can be seen in (1) and (2).

(1)	First	does	Nyonya Meneer or its heirs	still have the rights to the Mark which has been transferred to a third party based on positive legal procedures and provisions under the Trademark Law regime?
	Continuative	Finite	Participant	Rheme
	Textual	Interpersonal	Topical	
	Multiple Theme			

(2)	How far	can a distinction be made between instrumental and integrative motivation and its impact on identity?
	WH-interrogative	Rheme
	Interpersonal/Topical Theme	

The two clauses in (1) and (2) are the research questions of the articles. The clause in (1) uses the finite 'does' as the interpersonal theme, indicating a yes/no interrogative clause. In addition to the interpersonal theme, the clause is composed of a textual theme (realized by continuative) and a topical theme (realized by the participant). As the clause is composed of three themes, it is categorized as a multiple-theme clause. The use of finite as the independent theme (compared to the clause in (2)) is motivated by the fact that the answer to this question must also be composed of multiple themes because it must contain positive or negative polarity as the first theme.

Unlike clause in (1), clause in (2) is composed of a simple theme. The interpersonal theme 'WH-interrogative' also serves as the topical theme because the expected answer to this question will be the element of transitivity, i.e., a circumstance. The answer requires neither an interpersonal theme nor a textual theme. Therefore,

WH- interrogative 'How far' in this context serves as both interpersonal and topical themes (Interpersonal/Topical).

The use of interpersonal themes in the research questions has been confirmed in the existing literature (Branson, 2004; Mack, 2018; Teodosiu, 2019). Nevertheless, some journals do not require the introduction to include the research questions. They are replaced by the research objectives, which are not realized in an interrogative mood. The same policy is applicable in the journals taken as the data source of this study, which is also the factor leading to the less frequent use of interpersonal themes found in this study.

The results of the data analysis also show that textual themes are used more frequently than interpersonal themes. This confirms the existing literature that an introduction section of articles should present why the study needs to be carried out and why the reader should care about the article and find it interesting (Mack, 2018; Nair & Nair, 2014). Besides, in reasoning, the logical relationship between the ideas and the good organization of ideas is highly required; therefore, textual themes are very much desired. This confirms the existing literature arguing that textual themes are used to keep the organization of ideas (Eggins, 2004; Halliday, 1994; Refnaldi & Rosa, 2016). Moreover, the results of this study support the findings of the research done by Ebrahimi (2016), who found that textual themes were used more frequently than interpersonal themes in the abstracts. The similarity of the findings is mainly caused by the same object of the study, i.e., research articles. While Ebrahimi (2016) focused on the abstract section, this present study focused on the introduction section.

4.2 Theme Structure in the Introduction of Research Articles

Theme structure in this study is shown in the pattern or order of the theme components used in the clauses, as the simple theme is the dominant theme used in the research articles. Topical is the pattern most frequently used. Study the clauses in (3) and (4).

(3)

The Javanese Succession War	was a war against the Company,
Participant	Rheme
Topical Theme	

(4)

On the Javanese side,	they lost around 200,000 lives
Circumstance	Rheme
Topical Theme	

The theme structure used in the clauses in (3) and (4) is composed of Topical. However, the elements that compose the Topical pattern are different. The Topical pattern in (3) is realized by the participant, while the circumstance realizes the Topical pattern in (4). The difference is mainly caused by the writer's intention to keep the organization of the ideas. As mentioned in the existing literature, the theme contains given information (Eggins, 2004; Halliday, 1994). Therefore, the choice of 'On the Javanese side', as the theme in (4) is intended to provide given information in the theme position.

The next theme structure used in the introduction section of the research articles is a Textual^Topical pattern. Some examples are provided in (5) and (6).

(5)	however,	the voiced uvular trill [ʀ] and the voiced uvular fricative [ʁ]	are also widely used in other parts of Germany (especially in the North),
	Conj. Adjunct	Participant	Rheme
	Textual	Topical	
	Multiple Theme		

(6)	And	many of them	will be ungrammatical (i.e. contradictory to the rules in the reference books of grammar).
	Structural	Participant	Rheme
	Textual	Topical	
	Multiple Theme		

The textual theme of the clause in (5) is realized by conjunctive adjunct 'however', while the topical theme is realized by participant 'the voiced uvular trill [ʀ] and the voiced uvular fricative [ʁ]'. The Textual^Topical pattern (realized in conjunctive adjunct and participant) is intended to explicitly show how the present clause is related in meaning to the previous clause. In this context, the present clause contrasts the meaning conveyed in the previous clause.

Meanwhile, the textual theme of the clause in (6) is realized by the conjunction 'and', and the topical theme is realized by participant 'many of them'. The use of the Textual^Topical pattern in this context (realized in conjunction and participant) shows that there is another idea that has an equal meaning with the message conveyed in the previous clause.

In addition, the theme structure used in the introduction section of the research articles is an Interpersonal^Topical pattern. This pattern emphasizes the mood function in the clauses presented in the introduction. Some examples can be seen in (7) and (8).

(7)	In general,	social classes	are divided into three classes that are upper, middle and lower.
	Comment Adjunct	Participant	Rheme
	Interpersonal	Topical	
	Multiple Theme		

(8)	Will	the copyright legal regime	still be able to protect the copyright of the portrait used as a trademark for the product?
	Finite	Participant	Rheme
	Interpersonal	Topical	
	Multiple Theme		

The use of the interpersonal theme realized by the comment adjunct 'In general' in (7) means that the message contained in the clause is generally true, not completely true. Such a meaning is usually conveyed in the introduction of a research article, particularly in exploring the research gap.

Meanwhile, the interpersonal theme of the clause in (8) is realized by finite 'will', indicating interrogative mood. Thus, the Interpersonal^Topical pattern can be used to form an interrogative clause. This pattern is used in writing research questions in the context of the introduction of research articles.

Furthermore, the other theme structure used in the introduction of the research articles is a Topical^Interpersonal pattern, as shown in (9) and (10).

(9)	According to village heads and	generally	those who do marriage at a

researcher records during the study,		young age no longer go to school, especially for women,
Circumstance	Comment Adjunct	Rheme
Topical	Interpersonal	
Multiple Theme		

(10)

This mere fact,	of course,	does not mean
Participant	Comment Adjunct	Rheme
Topical	Interpersonal	
Multiple Theme		

The Topical^Interpersonal pattern is an unusual theme structure because a topical theme commonly occupies the final theme element. As shown in the clause in (9), the interpersonal theme 'generally' is used after the topical theme which is realized by the circumstance of angle 'According to village heads and researcher records during the study'. This is caused by order of importance based on the writer's point of view. The comment adjunct in this context is considered less important than the circumstance of angle, so when it occupies the initial position, it may change the message intended to be conveyed. The same pattern is also used in the clause in (10). However, the topical theme is realized by the participant. Therefore, the Topical^Interpersonal pattern can be realized by all elements of topical and interpersonal themes.

In addition, to be composed of two theme types, the multiple themes in the introduction section of the research articles are composed of three theme types. The first pattern is a Textual^Interpersonal^Topical pattern, as shown in (11) and (12).

(11)

Because	psychologically and bilogistally	young married couples	are considered immature to be able to conceive, give birth and not ready to face household problems (Rifiani, 2011; Minarti, 2014).
Conj. Adjunct	Comment Adjunct	Participant	Rheme
Textual	Interpersonal	Topical	
Multiple Theme			

(12)

Or	are	they	completely reprobate?
Structural	Finite	Participant	Rheme
Textual	Interpersonal	Topical	
Multiple Theme			

The Textual^Interpersonal^Topical pattern in (11) is realized by conjunctive adjunct, comment adjunct, and participant, respectively. In this context, the pattern wants to convey the message through reasoning, providing some views concerning the young married couple. In other words, the truth of the message is only seen from psychological and biological viewpoints. This shows that the theme pattern has influenced the meaning or message contained in the clause.

The clause in (12) is typically a research question, which can be identified from the element that constitutes the interpersonal theme. The Textual^Interpersonal^Topical pattern realized by conjunction, finite, and participant constitutes a yes/no interrogative clause. The use of the conjunction 'or' has an essential role in showing the relationship between this present clause with the previous clause, i.e., the clause is an additional alternative research question.

Another theme structure composed of three theme types is realized in the Interpersonal^Textual^Topical pattern. Some examples can be seen in (13) and (14).

(13)

especially	when	it	comes to the individual's knowledge and attitude towards the object.
Comment Adjunct	Conj. Adjunct	Participant	Rheme
Interpersonal	Textual	Topical	
Multiple Theme			

(14)

Unlike	if	the one who uses it	is the owner himself.
Comment Adjunct	Conj. Adjunct	Participant	Rheme
Interpersonal	Textual	Topical	
Multiple Theme			

The Interpersonal^Textual^Topical pattern in (13) is used to specify the meaning contained in the present clause from the more general meaning conveyed in the previous clause. Such a meaning is obtained because of the use of the comment adjunct 'especially' as the interpersonal theme.

Like the clause in (13), the meaning of the clause in (14) is also influenced by the element of the interpersonal theme because it occupies the initial position in the Interpersonal^Textual^Topical pattern. Nevertheless, unlike the clause in (13), the meaning contained in the clause in (14) is contrastive, contrasting its meaning from the meaning conveyed in the previous clause.

Based on the results of data analysis concerning the theme pattern, the findings of this study are summarized and displayed in Table 2.

Table 2. Theme pattern used in the research articles.

No.	Theme pattern	Frequency	
		Number	Percentage
1	Topical	435	59.26%
2	Textual^Topical	238	32.43%
3	Interpersonal^Topical	22	3.00%
4	Topical^Interpersonal	10	1.36%
5	Textual^Interpersonal^Topical	9	1.23%
6	Textual^Textual^Topical	8	1.09%
7	Topical^Textual	6	0.82%
8	Interpersonal^Textual^Topical	4	0.54%
9	Textual^Topical^Interpersonal	2	0.27%
	Total	734	100%

As displayed in Table 2, this study found nine theme patterns in the introduction section of the research articles published in Indonesian national journals. The Topical pattern dominates the theme structure. This pattern is the typical characteristic of theme patterns in the simple theme clause. The Textual^Topical pattern occupies the second most frequent use of theme structure. This pattern, in addition to placing an emphasis on the participant, process, and circumstance of the clause, pays close attention to how the present clause is logically related in meaning to the present clause(s). Moreover, this pattern is particularly useful to the reasoning process in arguing that the topic is worth studying and that the article offers a novelty. This finding is in line with the previous research findings suggesting the use of textual themes in writing arguments (Anwar & Amri, 2020; Keskin & Demir, 2021; Wang, 2007). Textual themes help control the flow of information that allows readers to follow the arguments (Keskin & Demir, 2021).

The third most frequent theme pattern is an Interpersonal^Topical pattern. This pattern is particularly used in presenting the research questions in the context of the introduction of research articles. This pattern typically comprises finite or WH-interrogative as the interpersonal theme elements. The finding confirms the existing literature that an Interpersonal^Topical pattern is used to write an interrogative clause (Eggins, 2004; Halliday, 1994). The fourth frequent theme pattern is a Topical^Interpersonal pattern, which is considered the variation of the Interpersonal^Topical pattern. However, this pattern is not used in presenting the research questions; it is used to present reviews on previous studies that help build the presentation of the research gap.

The next frequent theme pattern is a Textual^Interpersonal^Topical pattern. Although this pattern is less frequent than the previous four patterns, it is also valuable for presenting research questions. This pattern is used particularly in formulating a series of research questions to show how all the research questions are related to one another. The other theme patterns, despite their very low frequency, are also needed in writing an introduction of research articles.

These findings confirm the theme patterns in the existing literature. Eggins (2004) proposed four theme patterns, i.e., Topical, Interpersonal^Topical, Textual^Topical, and Textual^Interpersonal^Topical. Moreover, the findings of this study support the results of the research done by Anwar and Amri (2020), who found three theme patterns in the discussion texts written by the third-year students of the English Department of Universitas Negeri Padang: Topical, Textual^Topical, and Interpersonal^Textual^Topical. However, this research found six more theme patterns in the introduction section of research articles published in Indonesian national journals. The different status of the texts causes the different findings.

Furthermore, the results show that a clause theme can be composed of more than one element; therefore, in the case of multiple themes, all theme elements are called the starting point of the message. Nevertheless, the order of theme elements influences the meaning conveyed. This study found that certain order of theme elements (certain theme patterns) conveys certain meaning.

5. CONCLUSIONS

The big gap between the use of simple themes and multiple themes in the introduction section of the research articles published in National Indonesian journals indicates a lack of quality articles in terms of ideas organization. The introduction is a collection of unrelated clauses because they contain many simple themes. More multiple themes, especially those composed of textual theme elements, are needed to show the interrelationship among the clauses in the introduction.

The theme patterns also play an essential role in writing an introduction of research articles. These patterns can be characterized based on the function of the clauses in the introduction, whether to identify the problems studied, present the gap, or formulate the research questions. Moreover, certain theme patterns characterize the meanings or message conveyed in the clause. This implies that the choice of the first theme element greatly influences the meaning of the clause. Thus, studying theme types and structure is instrumental in improving the quality of the introduction of research articles.

The results of this study have implications to a systematic way of writing research articles, especially in presenting the introduction section. There is a tendency to use different theme patterns in writing different contents of an introduction. A Topical pattern helps introduce several terminologies used in the study. A Textual^Topical pattern is useful in presenting the research gap. Meanwhile, an Interpersonal^Topical Pattern is very helpful in writing the research questions. Introducing these patterns will help writers, especially novice writers, to successfully write a research article.

This study only focuses on the introduction section of the research articles, whose findings may differ when the research focus is addressed to the other sections or parts. Therefore, it is suggested that other researchers study theme structure in the other sections of research articles. Furthermore, this study only focuses on the introduction of research articles published in Indonesian national journals. This provides an opportunity for further research to focus on research articles published in more reputable journals, either reputable national or international journals. In teaching, lecturers are suggested to introduce theme types and patterns in teaching students how to write a research article.

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