Exploring Nominalization Use in Graduate Thesis Abstracts: An SFL Approach to Academic Writing

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ABSTRACT

Abstract becomes the mandatory part of an article which should be concise and lexically condensed. Unfortunately, not all academic writers can meet this demand. Following Halliday & Matthiessen's (1999) types of the grammatical metaphor in which the nominalization plays as the main tendency of the construal, this study investigates nominalization cases and how they are manifested in the texts. Seven graduate students' thesis abstracts of the Linguistics Department of a state university in Indonesia were opted as the object of the investigation. Each instance of the nominalization was coded, counted, and classified to decide their types and an in-depth elaboration of how they are manifested in the texts is provided as well. The results showed that the graduate students employed all types of the nominalization to increase the abstracts' conciseness. The Process nominalization realized from the process-thing transference highly dominates the abstracts. The findings also reveal a wide gap of the nominalization use between the process nominalization and the other types indicating the students' lower intermediacy of the nominalization mastery in the academic writing. Therefore, the explicit teaching of the nominalization is highly recommended as this could be of value to the students involved in the scientific publication in this university.

Keywords: academic writing, grammatical metaphor, nominalization, thesis abstract

INTRODUCTION

Nowadays, most scientific publications include an abstract as the mandatory component to be fulfilled. The reason for such inclusion lies in its prominent role as a doorway to give the reader precise and succinct information on the full report. Abstracts acted as the cover of an article that would bring up the first impression to anyone or any party concerned with scientific writing, like an editor, a reviewer, or readers (Lorés 2004). Thus, the abstract has gained significant attention as an important part of this genre (Al-Khasawneh 2017). The abstract depicts the whole content of the research report. It contains some information, such as the research purpose/objectives, the research methodology, the findings/results, and the conclusions (Bhatia 1993).

As a micro-part of the academic discourse, the abstract writing necessitates the writing skills of a particular genre and format involving the technical terminology and grammar (Halliday 1993). Hence, the abstract writers are required to be able to employ a specific pattern of information packaging emphasizing not only the word economy but also the academic touch for retaining its academic discourse. In addition, the academic writers are demanded to provide a concise text summing up the main issues raised in the scientific writing. In view of that, the common features, such as the nominalizations, the lexical density, the detached stance, the particular kinds of discourse markers, the particular uses of modal verbs, and a wide variety of connectives are closely associated with this genre (Snow & Uccelli 2009). All of those characteristics merge creating more concise and precise academic texts.

In short, the abstract writing skill has a very prominent role in conveying the whole picture of a scientific report in a concise and lexically condensed academic text.

To attain the aforementioned purposes, the functionalists suggest using grammatical metaphors in which the nominalization plays a major role. In the grammatical metaphor, one grammatical class or one grammatical structure is substituted by another. In this case, the grammatical metaphor refers to the meaning transference from a congruent form into a metaphor possibly made by the grammar (Halliday 1993). In the academic discourse, however, not all academic writers can make use of this grammatical feature. Ezeifeka (2015) stated that proficiency in exploiting the grammatical metaphors including the nominalization in the scientific discourse had not yet developed uniformly across all text users. Communicating scientific findings by using the English language does not come easily to most authors. Therefore, any study devoted to uncovering their intermediacy in the abstract writing obtains its significance.

The nominalization as the predominant feature of the grammatical metaphor plays a pivotal role in creating a good quality of an academic writing, including the abstract (Fang 2005; Snow & Uccelli 2009). Due to its significance in the academic writing, when the students lack understanding of these features, they may encounter significant obstacles in understanding an academic text (Fatonah 2014). Based on those above-mentioned reasons and considering the students' need to comprehend the realization of the nominalizations, the study on nominalization use in the abstract is worth investigating.

In the Indonesian educational context, the evaluation on the nominalization use particularly in the English abstracts in the Indonesian university context has yet to be adequately empirically examined. For that reason, this study is another step towards understanding the Indonesian tertiary students' linguistic strengths and weaknesses in the academic literacy through the investigation of the nominalization use. Another formulated novelty underlying this study is that its outcomes will provide the valuable input for the English for Academic Purposes (EAP) practices with the particular emphasis on the grammatical metaphor and the nominalization. Only through explicit teaching of the nominalization process which has been called for in other studies (Fang 2005; Schleppegrell 2004; Wenyan 2012), academics and students will be aware of the nominalization mechanisms. Since most of the scientific publication sources are at the higher education level, this study is carried out at this level proposing two objectives, namely: to uncover the nominalization types, and to demonstrate the way the nominalizations were deployed in the graduate thesis abstracts.

LITERARY REVIEW

Current studies have discovered that the English as a Foreign Language (EFL) writers experience difficulties when attempting to write in an academic style (Nys 2018). A number of those studies involved the systemic functional linguistics (SFL) as the key concepts of the analysis. A particular topic of interest in this area is the use of nominalization. Researchers took different perspectives within this nominalization use, such as different levels of the competence, the various disciplines, the schematic or cognitive-move structure, and the strategy to reach the conciseness without leaving any key point in the research (Bhatia 1993).

In the Indonesian educational context, Refnaldi (2015) studied how the students used the grammatical metaphors in their abstracts. By using the content analysis, this study examined 20 undergraduate students' thesis abstracts. The findings showed that the use of the grammatical metaphor was not yet optimal because the students lack the understanding of the grammatical metaphor functions in the academic texts. Therefore, improving the students' skills in the use of the grammatical metaphors was necessarily needed. In addition, Fatonah's findings about students' understanding of the nominalization in the scientific reading passages revealed that the students did not have an adequate knowledge of the nominalization for the scientific text comprehension (2014). Therefore, Fatonah recommended that the teaching and learning should focus on raising the students' awareness of the nominalization in the scientific texts. Afifi (2021) explored the development of the academic literacy of the Indonesian EFL students. She investigated the grammatical metaphor (GM) employed by the EFL learners in their academic texts. The data were collected cross-sectionally, representing two academic years of the undergraduate study: the first and third years. The result of the study suggests that there is an urgency to expose students to the grammatical metaphors and more basic lexico-grammar teaching in a more explicit way to enable them to write the valued texts academically. The last study by Mahmudah et al. (2018) revealed that the study of the grammatical metaphors on the academic texts had an important influence in the development of the study of the language.

The concluding remark to those preceding studies is that all of them have given fruitful contributions to the theoretical as well as the empirical findings of the grammatical metaphor study. They revealed how lack of the grammatical metaphor competencies resulted in the lack of the lexical density and the information compactness as the key features of the academic writing. Therefore, most of those studies suggested the need to strengthen the students' competencies of these dominant features. However, to date, none of those studies particularly explore an in-depth investigation on the nominalization use and how these features are implemented in the text. Moreover, this study adopted the grammatical metaphor concepts proposed by Halliday & Matthiessen (1999) to discover the nominalization types and the detail stages of identifying and applying the nominalization in the text. The aforementioned purposes will be very helpful for the pedagogical purposes.

Underlying Theories

Regarding the objectives of this study which are to explore the types of nominalizations and to discover how graduate students deploy these features in their abstracts, some related theoretical frameworks to support the analysis are reviewed. As this study uses the SFL approach to the nominalizations, the grammatical metaphor types proposed by Halliday & Matthiessen (1999) is used as the basis of identifying the nominalization cases in the abstracts.

There are thirteen types of grammatical metaphors, six of which are categorized as nominalizations, e.g.: quality nominalization (type 1), process nominalization (type 2), circumstance nominalization (type 3), relator nominalization (type 4), zero nominalization (type 11), and the expansion of thing (type 13) as can be seen on *Table 1*.

The quality nominalization (type 1) is grammatically construed from an adjective into any nominalized word or a word group. This transfer changed the semantic function from a quality to a thing. The process nominalization (type 2) derives from a verb which is transferred into a noun. This transfer

changed the semantic function from a process to a thing. The circumstance nominalization (type 3) can be realized from the transference of a prepositional or a prepositional phrase to a noun. This transfer shifted the semantic function from a circumstance into a thing. The relator nominalization (type 4) refers to any nominalized word or a word group derived from a conjunctive. This transfer shifted the semantic function from a relator to a thing. The zero nominalization (type 11) is construed from the transference of zero to a noun.

Table 1: Classification of Nominalizations

Type	Semantic Function	Grammatical Function	Lexicogrammatical Class
1	Quality to thing	Epithet to thing	Adjective to noun
2	Process to thing	Event to thing Auxiliary to thing Catenative to thing	Verb to noun
3	Circumstance to thing	Minor Process to thing Location, extent, & c to classifier	Preposition to noun
4	Relator to thing	Conjunctive to thing	Conjunction to noun
11	+ noun	+ thing	None to thing
13	Thing (expansion)	Head to modifier	Noun to various

Finally, the expansion of things (type 13) is the shift from a noun to various classes. The semantic change of this type of nominalization is the shift from a thing into an expansion of a thing. This type is somewhat unique since it makes a shift from an entity to a modifier of an entity. The following example represents the explanation of the case. The metaphor of *the driver's driving of the bus* has a congruent version as *the driver is driving the bus*. This sentence has been rank-shifted. The process *is driving* now becomes the head of the nominal group *driving*. *The driver*, as the actor of the action and the subject in the congruent version, now becomes a premodifier to the head *driving* in the metaphorical version. In this case, 'the driver's' is a possessive deictic, a type-13 grammatical metaphor (Halliday 1998, 212).

Concerning the recognition of the grammatical metaphor, this study also uses Ravelli's concepts (1999) of two devices in determining whether certain expressions are the result of nominalization or not:

1. Derivation
   Most of the grammatical metaphors are shaped through the derivational processes. Nevertheless, this is not the only way to construct them, since a lot of metaphorical examples are found without any derivational suffixes, and not every suffix will result in a metaphorical form (Ravelli 1988: 141).
2. Agnation.
   Agnation is formed by pairing the congruent and the metaphor of the same 'idea' though there is no requirement for the expressions to be precisely synonymous. It is based on the fact that any metaphorical expression has (an) agnate form(s) which show(s) its (more) congruent realization(s) (Ravelli 1999, 77). So, by rewording a congruent expression into its metaphorical expression, we can see that they relate to one another in meaning.

RESEARCH METHOD

This research belongs to a document analysis which focuses on analyzing the written documents. In this study, the text analysis was carried out and focused on the nominalizations found in the graduate student thesis abstracts, and most of the research was spent on analyzing those cases to answer the research questions proposed. Types of the grammatical metaphors under the systemic functional linguistics (SFL) were used as the main basis of the nominalization analysis. In this study, the nominalized words and phrases serve as the main data.

As the academic writing is one of the most demanding fields in using the nominalizations, the researcher selected English thesis abstracts written by graduate students of the Linguistics Departments of a State University in Easy Java. Among 37 of graduate thesis abstracts in this department, seven of which were written in English. Those 7 abstracts were written by graduate students who had English undergraduate Background. Since no specific rules of word limits for thesis abstracts applied in this department, each thesis abstract analyzed in this study consists of averagely 600 words and the total number of words analyzed consists of 4,123 words.

Responding to the research questions, each instance of the nominalization was coded, counted, and classified based on the six types of the nominalizations enumerated by Halliday & Matthiessen (1999). In deciding the nominalization instances, this study took account of Ravelli's (1999) metaphorization concept, namely: derivation and agnation. The derivation involves the derivational suffixes, and the agnation deals with how the linguistic items relate to one another. For example, the entity *purpose* is a metaphorical realization of the process *aimed at*.

The document analysis conducted in this study covered some stages as follows: nominalization instances were multiple-checked manually and color-tagged according to their transferences. Once completed, all the data were then tabulated into the tables and then counted to find their frequencies. When done, their distribution would be presented and the detail elaboration of how those nominalizations were deployed would be given in the discussion section following Halliday & Matthiessen's (1999) concepts of nominalization realizations.

FINDINGS AND DISCUSSIONS

To attain the first objective about the types of nominalizations, the instances of nominalizations were identified and classified by following Halliday & Matthiessen's (1999) types of grammatical metaphors. *Table 2* offers a pictorial representation of the distribution of nominalization types. It shows the deployment of each type of the nominalization in each abstract. Type 2 derived from the process nominalization (process-thing) shift amounted the highest number of all the nominalization cases in the texts. The domination of the process nominalization reveals its prominent role that this strategy plays in formulating the scientific discourse which culminates in the lexical text condensation.

This study's findings are in accordance with the study by Yue et al. (2018) that the circumstance, relator, and the zero nominalizations rarely occur in this

type of discourse because of the technicality of the transference involved in them.

Table 2: Types of Nominalizations Found in the Abstracts

Thesis Number	Metaphorical Shift Type						
	1	2	3	4	11	13	Total
1	5	42	2	-	-	1	50
2	2	23	-	-	-	16	41
3	1	28	-	-	-	6	36
4	4	50	-	1	1	-	56
5	12	13	-	1	-	-	26
6	-	24	1	-	-	4	29
7	4	34	3	-	1	2	44
Total	28	214	6	2	2	28	280
Percentage	10	76.4	2.1	0.7	0.7	10	100

This study also reveals a wide gap in terms of the use in text between type 2 and other types of the nominalizations in terms of the writers' intermediacy on the nominalization use in the academic writing. The students with the limited competence on the grammatical metaphor would produce the higher nominalization use of the familiar types. On the other hand, the students with the higher proficiency are a step ahead in this learning process, so they try to experiment with other types of the grammatical metaphors in their use of the nominalizations (Nys 2018). To answer the second question related to how the nominalizations were deployed in the texts, the concepts by Halliday & Matthiessen (1999) about how each type of nominalizations can possibly be used in the text would be discussed. As shown in *Table 2* that all types of nominalizations were employed in the texts regardless of their wide gap of the frequencies. The following fine-grained elaboration on their types and how those types were taken into the actions in texts are described in the following description. The source of the extracts is identified based on the Thesis Number (TN).

This study examined the transference by which the nominalization is attained in the abstracts in the two areas. As suggested by Ravelli (1999) there are two ways of identifying the grammatical metaphor including the nominalization, which are the derivation and the agnation. This study found that the derivation was the dominant process with the rich array of the suffixes for achieving the nominalization, with the following suffixes showing a high frequency of the manifestation, such as: *-ion, -ity, -ance/cy/ce,* and *-sis*. The identical forms of the process-thing transference were also found in the texts, such as *result, change,* and *increase*. While the least the nominalization transference in the texts was by agnation, such as *desire* which equals to *wants to*.

The analysis of the corpus of the present study revealed that the most frequent suffixes used in the creation of nominalization was *-ion* nominalizations (e.g.: *explanation, production, description, communication*) which recorded 45.8% (N=70), followed by *-ity* nominalizations (*equality, difficulty, consistency*) which recorded 15% (N=23). The *-ing* suffix (*finding, making, writing*) recorded 11% (N=17) and *-ance/cy* nominalization (*influence, occurrence, importance*) which recorded 8.5% (N=13). This could be interpreted that students have a preference for *-ion* nominalizations more

than any other suffixes. This suffix is the most common one in the English language.

Table 3: Frequently Used Suffixes in the Abstracts

No	Suffix	Number
1	-ion	70
2	-ity	23
3	-ing	17
4	-ance/ce/cy	13
5	-sis	12
6	-or	9
7	-ment	4
8	-ness	3

This study's findings resemble Biber et al. (2002) that *-ion,* and *-ity* suffixes are the most frequent nominalizing affixes discovered. These results are also to some extent compatible with Holtz's (2009) findings that *-ion* nominalizations are the most frequent derivational nominalization used. In addition, Holtz identified *-ity* endings placed the second most frequent ones in abstracts in all domains, as well as in the present study in which *-ity* nominalizations were also frequently used. However, the fact that *-ment* endings was rarely used is somehow in contrast with Holtz's assertion that *-ment* nominalizations play an important role in linguistics. Other than derivation as the way to transform other grammatical function into entity, some uses of agnation were also detected in this study. The congruent forms mostly take catenative verb, such as: *aimed at* for metaphor form *purpose* or *desire* for metaphor form *want to*.

Type 1: Quality Nominalization

Quality nominalization occurs when an attribute, originally realized by an adjective, is expressed in the form of a noun functioning grammatically as a participant of the clause. In terms of the transformational process from a quality to a thing, this study found five types of suffixes were involved, namely: *-ity, -cy, -ance, -ence,* and *-ness.*

In terms of the preference of nominalization use, the following examples reflect the writer's choosing the nominalization because of the topic-related terms.

(1) the level of *the electability* (congruently realized as: how electable a candidate is) (TN2)
(2) some expressions of frustration (congruently realized as: some expressions when someone feels *frustrated*) (TN3)
(3) the students' *consistency* in writing (congruently realized as: [if] the students are *consistent* in their writing) (TN4)

The electability as in (1) is a specific term in politics, *frustration* as in (2) deals with a psychological condition, and *consistency* as in (3) is in some ways related to the learning progress, especially the error studies. However, since those nominalizations are close to daily uses, there is a possibility that the writers just picked up the terms from the daily exposure or linguistically ready-made ones. On the other hand, some other quality the nominalizations revealed in this study look to be tailored ones, meaning that the students have judiciously preferred these transferences instead of using a clause, as follows:

(4) the *specificity* and the *authenticity* of the hotel product (congruently realized as: the hotel product is *specific* and *authentic*) (TN1)

(5) the *predominance* of image (congruently realized as: the image is predominant) (TN2)

So, the fact that the nominalization is used instead of a congruent expression does not necessarily reflect that the abstract writer judiciously implements it in the text (Nys 2018). Some other examples interestingly show potentially double types of the nominalizations used within one nominal group, as in the followings:

(6) The first one is to check the *consistency* of the learner's writing. (TN4)

(7) The second test was aimed at knowing the students' *consistency* in making the mistakes. (TN4)

The two examples involved type 13 to construe a quality into a thing which involved the other nominalization in the nominal group, which resulted in a double-nominalized type 13 group, or called the nominalization within the nominalization. In the consistency of a learner's writing, there is first [if] the learner's writing is consistent and embedded therein is the learner's writing. If the writer is competent enough in the nominalization mastery, he or she will be able to rank-shift the learner's writing as a qualifier to be a classifier resulting in a more compact version as in the learner's writing consistency.

Type 2: Process Nominalization

Process nominalization is the most extensive and specialized one. This type construes other elements as a thing. The process nominalizations enable the abstract writers to rank-shift a clause into a nominal group functioning as a participant. In that way, the participant can be pre- and post-modifiedly creating a text that is tightly packed with information (Gray and Biber 2010). In other words, when remaining as a process, the chances for being characterized and taxonomized would be much less potential than those of the participants.

Calculating the results reveal that the graduate students highly frequently utilize the suffixes to form the nominalizations, such as *-ion, -ty, -ance, -sis, -ing* and the identical verbal-nominal shift. These suffixes reflect the most common way to transform a process into a thing, and these features were used a lot to state the research topics, procedures, and results (Eggins 2004). The highest transformation involving the suffixes from the processes to the entities is occupied by the *-ion* suffix which occupies 48.9% applied by adding the nominal suffix *-ion* to the process as shown below:

(8a) P1, P3, P9, and P12 get their second language *acquisition.* (TN6)

(9a) ...to give a clear *explanation* about the objects analyzed. (TN4)

To show the remapping of the discourse semantics onto the lexical grammar, the clauses were turned into the congruent forms as below:

(8b) P1, P3, P9, and P12 have *acquired* their second language.

(9b) ... to *explain* clearly about the objects analyzed.

In clauses (8a) and (9a), the nominalization enables the head words *acquisition* and *explanation* to gain pre-modification as in *a clear explanation* and *their second language acquisition.* Concerning the example *to give a clear explanation* (9a), a specific term is coined by Derewianka (1995) called 'Process+Range/Medium' construction. This construction can be defined as what would congruently be expressed as a process (e.g.: *dance*) is expressed metaphorically as the Range (e.g., do a *dance*) together with a lexically empty verb. The following is another example found in the abstract:

(10a) Descriptive method is a method to *take description, illustration, explanation* accurately and systematically. (TN6)

The remapping of the clause could be construed in a congruent form as the following:

(10b) Descriptive method is a method to *describe, illustrate,* and *explain* something accurately and systematically.

In addition, the verbal pattern *to take description, illustration, and explanation* (10a) is improperly opted as they do not collocate with each other and are not common in the English use. The proper collocation should be *to give a description, an illustration,* and *an explanation.* Derewianka (1995) said that such expressions might serve as the evidence of the writer's motivated use of the metaphor. In a condition that forced them to metaphorize some expressions, an overreaching reaction resulted in the awkwardness of what Derewianka (1995) called a 'faded metaphor'; that is, the 'clumsy' or 'self-conscious' metaphor resulted from the author's creative struggle with the phenomenon. The next deployment of the nominalization functions as the causal relations. The causal relation can be traced by unpacking the meaning of the clauses. There were two examples found from the whole texts.

(11a) The researcher analyzed the *influence* of social aspects on the film (TN7)

(12a) The *causes* of forest fires by human errors (TN3)

The possible congruent forms of those examples can be formulated as follows:

(11b) The researcher analyzed if social aspects *influence* the film.

(12b) Human error *caused* the forest fires .

In this case, the transformation of the process *influence* (11b) and *caused* (12b) to thing *influence* (11a) and *causes* (12a), allows the complex clause to be packed into a single clause by reconstruing one of the relations into a nominal group. Once the process is transformed into a thing, the potential of the nominal group to allow pre- and post-modification is open.

The use of *-ing* form reconstrual was also identified and employed in the texts. The following examples include:

(13a) Research method is presented to give the reader an *understanding of how* research is conducted. (TN4)

(14a) The novel originally portrays Gerry's gayness and his *coming* out (TN7)

(15a) They always do *upgrading* their hotel products (TN1)

Those metaphorical forms could be traced down into these clauses:

(13b) Research method is presented in order the reader *understand* how a research is conducted.

(14b) The novel originally portrays what Gerry feels to be gay and how he *comes out* with that.

(15b) They always *up-grade* their hotel products.

It is interesting to know that the transference also involves 'Process+Range/' by employing the process *to give* and put *the understanding* as a Range (13a). The next example, the metaphorical form of *his coming out* is meant to synergize with the previous nominalization *Gerry's gayness* (14a), allowing them to be more concise rather than their counterparts. In the last example, *do upgrading* (15a), this phenomenon is associated with the 'faded metaphor' as previously explained. *Do upgrading* (15a) is an attempt of the

metaphorization by employing the 'Process+Range' and overgeneralizing *upgrade* as a verb that needs *-ing* form when transferred to a noun in a condition requiring the author to nominalize it. In a particular condition, the day-to-day use of the 'Process+Range' construction, such as *to have dinner* for *to dine*, *to make a mistake* for *to err*, and *to take a bath* for *to bathe* could serve as the models for such modification (Derewianka 1995).

The homonym reconstrual was another process nominalization detected in the texts, as shown in the following examples:

(16a) The *result* of this research is ... (TN 1)
(17a) The linguistic aspects in communication strategy have big *impact* (TN2)
(18a) The *causes* of forest fires by human errors (TN3)
(19a) The *protest* is in a package of parody song (TN3)

In the clauses above, the congruent and the incongruent word forms involve no change, i.e., *result* (16a)*, impact* (17a)*, causes* (18a)*,* and *protest* (19a) The congruent realizations could be shown below:

(16b) This research *resulted* ...
(17b) The linguistic aspects in communication strategy *impact to ...*
(18b) The forest fires were *caused* by human errors
(19b) People *protest* the haze in a package of parody song

The reconstrual into this type of nominalization turns a figure as in (16b), (17b), (18b), and (19b) into an element as in (16a), (17a), (18a), and (19a), enabling the addition of other elements to be in. For example, in (17b), the process *impact to* is turned into a thing *impact* (17a), allowing it to be pluralized and characterized by premodifiers, i.e.: Epithet *big* resulted in *have big impact* (10.a). This example shows how the 'Process+Range' was used properly to form a 'View' relation as proposed by Jacobs (1987) in Halliday & Mathiessen (1999).

Other than the derivation reconstrual, a number of agnation were also used by the abstract writers. The agnation may be realized in the different word classes but possess relatively the same meaning. Below are some constructions in which their congruent forms may not seem to have a close relationship, yet they construe similar meaning.

(20a) The *purposes* of the study (TN5)
(21a) the student's *attitude* (TN5)
(22a) their *desire* (TN1)

The congruent realizations of the above examples could be shown below:

(20b) The study *aimed at ...*
(21b) The students *behave ...*
(22b) They really *want to ...*

Purposes (20a) in that context has relatively the same idea with *aimed at* (20b), *attitude* (21a) has relatively the same thought as *behave* (21b), and *desire* (22a) has similar concept of meaning with *want to* or *eager for* (22b).

Type 3: Circumstance Nominalization

Circumstance nominalization occurs when a prepositional phrase in the clause is metaphorically shifted into a noun and becomes the classifier of a nominal group. In this study, there were some cases of circumstance nominalizations covering 2.5% of nominalizations, as shown in the following examples:

(23a) many *Indonesian* hotels (TN1)
(24a) the *classroom* behavior (TN6)
(25a) the *public* discourse in the country (TN7)

(26a) the concealed messages within a *2015* film (TN7)

Those syndromes of circumstance can be congruently realized as follows:

(23b) many hotels *in Indonesia*
(24b) the behavior *in the classroom*
(25b) the discourse *in the public*
(26b) the concealed messages within a film produced in *2015*

From those cases, most of this type of nominalizations derive from prepositional phrases of place, such as *in Indonesia* (23b)*, in the classroom* (24b)*,* and *in the public* (25b) as well as prepositional phrase of time as in *in 2015* (26b). Before metaphorically converted to the classifier of noun phrases, those syndromes' position is prepositional phrase in congruent form. This circumstantial nominalization is indeed rare to occur in abstracts owing to its rare use of time or place in this discourse. Another reason may be due to the preference of the abstract writer to use the congruent form as prepositional phrase which is considered much easier to construct.

Type 4: Relator Nominalization

Relator nominalization derives from a conjunction which is then metaphorically construed as a noun which function as a participant in the clause. This pattern was only used twice in the texts regardless of the availability of their congruent forms in the abstracts that could be made into things. This nominalization strategy is the least grammatical metaphor used in the texts. The complexity of the transformational process may be the reason for its rare use. Two examples which were found in the abstracts are as follows:

(27) An error is produced *due to* the fact that the learners cannot identify what is correct and incorrect. (TN4)
(28) They are not allowed to make their own choices *due to* cultural or religious instructions. (TN5)

In example (27), the metaphorical relator *due to* which is congruently realized as a conjunction *because* was bound together with *the fact that* from the zero nominalization creates the sense of formality in the text. This is the most complex syntagmatic cluster of all texts in that it combines two different types of the nominalizations (type 4 and type 11) in a sequence, while most combinations of the types within one nominal group usually only use one subtype in type 13.

Type 11: Zero Nominalization

Based on Halliday's (1999) types of grammatical metaphors, the zero nominalization does not have any congruent form, rather it functions as an appositive to lead a clause. In this study, only two examples were found in the data.

(29) An error is produced due to *the fact that* the learners cannot identify what is correct and incorrect. (TN4)
(30) *The fact that* gayness is the most hate-filled and controversial issue in Indonesia impacted the proportion of gay scenes in the film. (TN7)

In example (29), the congruent expression *the learners cannot identify what is correct and incorrect* is combined with the zero nominalization *the fact that* allowing the complex compound clause to stand as a participant in a sentence rather than a sentence on its own. While in the example (30), *gayness is the most hate-filled and controversial issue in Indonesia* is combined with *the fact*

that resulting the clause stands as a participant that enables other processes to be in to make a sentence.

Type 13: Expansion of Thing

The shift from an entity to a modifier is the second most highly used type, amounting 28 cases. In this type, the shift occurs from a thing into an expansion of a thing either as (a) a qualifier, (b) a possessive deictic, or (c) a classifier. Another way to shift a thing into an expansion of a thing is by changing the grammatical class from an adverb/prepositional phrase into an adjective/various thing. This semantic shift transfers from the circumstance into the expansion of things as descriptive. In those ways, the modifiers can be developed to build up the pre-modifier into the left-branching complexity of structure, so as a post-modifier which enables the right-branching complexity (Morley 2000). Below is an example of the findings based on their subtypes.

The first subtype of expansion of thing functions as a qualifier realized in *of noun/noun phrase* as the following:

(31a) the *manifestations* of popular culture (TN7)
(32a) an *adaptation* of a best-selling novel (TN7)
(33a) the making of this thesis (TN4)

The congruent forms of the above examples of the expansion of things can be expressed as follows:

(31b) The popular culture is *manifested* through…
(32b) The best-selling novel was *adapted* …
(33b) This thesis was *made* …

The second sub-type of the expansion of thing is possessive deictic realized in two ways: the genitive phrases formed by giving an apostrophe and *-s* at the end of the nominal phrase and the possessive adjective. Some examples of the genitive phrases are shown as the following:

(34a) Indonesians' perspectives (TN7)
(35a) the student's attitude (TN4)
(36a) learners' inefficient performance (TN4)
(37a) the students' writing narrative texts (TN4)

The congruent forms of the above examples of the expansion of things can be expressed as follows:

(34b) the perspectives of Indonesians
(35b) the attitude of students
(36b) learners perform inefficiently
(37b) the students write narrative texts

The metaphorical forms of (34a) to (37a) and the congruent forms of (34b) to (37b) are actually in the form of qualifiers, yet in order to have more concise form of the nominalization, the genitive phrases ('s) as in examples (34a) to (37a) could be chosen as an alternative. The second way of constructing the possessive deictic is by the possessive adjective. The following examples show this sub-type.

(38a) *their* process of learning English (TN4)
(39a) *their* post-graduate studies (TN7)
(40a) *their* desire (TN1)

The congruent forms of the above examples of the expansion of thing can be expressed as follows:

(38b) The way *they* proceed to learn English.
(39b) *They* study post-graduate.

(40b) *They* really want to ...

In example (38a), it is still possible to change the qualifier *process of learning English* into a classifier *English learning process*. By doing so, it can be more compact to become *their English learning process*. While in (40a), the normalized word *desire* was opted by using the catenative agnation instead of the congruent form which derives from *want to* or *eager for*.

The third type of the expansion of a thing is the classifier (a particular subclass of thing) (Morley 2000). A lot of times the congruent version of this subtype is the expansion of thing as a qualifier as shown in these examples.

(41a) unstrict government regulation (TN3)
(42a) transitivity analysis (TN3)
(43a) religious instructions (TN5)

The congruent forms of the above examples of the expansion of things can be expressed as follows:

(41b) the unstrict regulation of government
(42b) the analysis of transitivity
(43b) the instructions of religion

CONCLUSION

Following the types of the grammatical metaphor, particularly those categorized as the nominalization, this study revealed that the graduate students made use of nominalizations for the purpose of condensing their abstracts. All the six types of nominalizations were employed in various numbers. Process nominalization highly dominates the texts, showing its prominent role in this discourse. The technicality of the transference is associated with the rare use of some other types. The different frequency of use between the process nominalization and other types of the nominalizations is associated with the students' limited competence on the grammatical metaphors resulting the higher use of the familiar types. The students deployed all types of nominalizations in relatively various forms despite the wide gap of the frequency differences in each type. Some key points to note from the findings are: (1) some nominalization uses are driven by the paper's topic; (2) there is a tendency of the lack of the control in the metaphorical reconstrual, such as the incomplete morphological reconstrual; (3) combining two types of nominalizations in one syndrome reflects the intermediacy of the writer; and (d) there is still the possibility to reconstrue the abstracts into the more concise form by following Halliday & Matthiessen's (1999) grammatical metaphor concepts. Since the findings reveal a wide gap of the nominalization use between the process nominalization and the other types that indicates the students' lower intermediacy of the nominalization mastery in the academic writing, it is highly recommended that the Graduate Linguistic Departments explicitly takes grammatical metaphors and particularly nominalizations as part of its learning material as this could be of value to the students involved in scientific publications.

REFERENCES

Afifi, Nur. 2021. "Exploring the Use of Grammatical Metaphor in Indonesian EFL Learners' Academic Writing." *Indonesian Journal of Applied Linguistics*10 (3): 719-731. https://doi.org/10.17509/ijal.v10i3.31759

Al-Khasawneh, Fadi Maher. 2017. "A Genre Analysis of Research Article Abstracts Written by Native and Non-Native Speakers of English".*Journal of Applied Linguistics and Language Research* 4(1): 1-13

Bhatia, Vijay Kumar. 1993. *Analysing Genre: Language Use in Professional Settings.* London: Longman

Biber, Douglas, Susan Conrad, & Geoffrey Leech. 2002. *A Student Grammar of Spoken and Written English*. London: Longman

Biber, Douglass & Bethany Gray. 2010. "Challenging Stereotypes about Academic Writing: Complexity, Elaboration, Explicitness." *Journal of English for Academic Purposes* 9 (1): 2-20. https://doi.org/10.1016/j.jeap.2010.01.001

Derewianka, Beverly. 1995. *Language Development in The Transition from Childhood to Adolescence: The Role of Grammatical Metaphor* (PhD Dissertation). Sydney, Australia: School of English and Linguistics-Macquarie University. http://hdl.handle.net/1959.14/176445

Eggins, Suzanne. 2004. *An Introduction to Systemic Functional Linguistics* (2nd Edition). New York: Continuum

Ezeifeka, Chinwe R. 2015. "Grammatical Metaphor: In Search of Proficiency in Research Abstract Writing". *SAGE Open* 5 (1): 1-14. https://doi.org/10.1177%2F21 582440 15577 667

Fang, Zhihui. 2005. "Scientific Literacy: A Systemic Functional Linguistics Perspective". *Science Education* 89 (2): 335-347. http://dx.doi.org/10.1002/sce. 20050

Fatonah. 2014. "Students' Understanding of the Realization of Nominalizations in Scientific Text." *Indonesian Journal of Applied Linguistics* 4(1): 87-98. http://dx.doi.org/10.17509/ ijal.v4i1.602

Halliday, Michael Alexander Kirkwood & James Robert Martin. 1993. *Writing Science: Literacy and Discursive Power*. London: Falmer Press

Halliday, Michael Alexander Kirkwood. 1998. "Things and Relations: Regrammaticizing Experience as Technical Knowledge". In J. Martin & R. Veel (Eds.). *Reading Science: Critical and Functional Perspectives on Discourses of Science*. (185-235). London: Routledge

Halliday, Michael Alexander Kirkwood & Christian Matthias Ingemar Martin Matthiessen. 1999. *Construing Experience Through Meaning. A Language Based Approach to Cognition*. London: Continuum

Holtz, Mônica. 2009. *Lexico-grammatical Properties of Abstracts and Research Articles: A Corpus-Based Study of Scientific Discourse from Multiple Disciplines* (PhD Dissertation). Darmstadt: Department of Linguistics and Literary Studies, Technische Universitat Darmstadt

Lorés, Rosa. 2004. "On RA Abstracts: From Rhetorical Structure to Thematic Organization". *English for Specific Purposes* 23 (3): 280-302. DOI:10.1016/j.esp.2003.06.001

Mahmudah, Hajrah, Arni Amir & Muhamad Ahkam Arifin. 2018. "Grammatical Metaphor in Academic Texts of Indonesian Students' Thesis."*International Journal of Humanities and Innovation (IJHI)* 1(1): 54-61. DOI: 10.33750/ijhi.v1i1.8

Morley, George David. 2000. *Syntax in Functional Grammar. An Introduction to Lexicogrammar in Systemic Linguistics*. New York: Continuum

Nys, Mathias. 2018. *Grammatical Metaphor in Non-Native English Academic Writing A Comparison of Higher-Marked and Lower-Marked Papers Written by Non-Native University Students* (Master Thesis). Ghent: Faculty of Arts and Philosophy, Ghent University

Ravelli, Louise Jane. 1999. *Metaphor, Mode and Complexity: An exploration of Co-varying Patterns*. Nottingham: Department of English and Media Studies, Nottingham Trent University

Refnaldi. 2015. "When Verbs Become Nouns: Grammatical Metaphor in Students' Academic Texts". *Proceedings of the Third International Seminar on English Language and Teaching*. 3: 27-33. Padang: Universitas Negeri Padang

Schleppegrell, Mary Jane. 2004. "Technical Writing in a Second Language: The Role of Grammatical Metaphor". In LJ Ravelli & RA Ellis (Eds.). *Analysing Academic Writing: Contextualized Frameworks* (172-189). New York: Continuum

Snow, Catherine & Paula Uccelli. 2009. The Challenge of Academic Language. In D. Olson & N. Torrance (Eds.). *The Cambridge Handbook of Literacy* (112-133). Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/cbo9780511 609664.008

Wenyan, Gao. 2012. "Nominalization in Medical Papers: A Comparative Study". *Studies in Literature and Language* 4(1): 86-93

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