

Original Paper

Using Nominalization in Scientific Texts; A Practical Review of the Related Studies

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Abstract

Many scholars have focused on using the nominalization over the scientific discourse. On the other hand many scholars have focused on the historic origins of nominalization in scientific discourse (Banks, 2005); realizing the grammatical metaphor in modern prose fiction (Farahani & Hadidi, 2008). Furthermore, Susinskiene (2009) examined the influence of verb-based nominalization to cohesion over the history texts. Baratta (2010) examined moreover using the nominalization in the writing performance of six undergraduate students. Finally, Wenyan (2012), examined the role of nominalization in the English Medical Papers (EMP) created by native English speakers and Chinese writers. These investigations have focused the vital role of using the nominalization in the skillful arrangement of academic discourse. Nevertheless, the realization between discipline specificity and nominalization is not focused a lot. In the current paper, the researcher tried to review the nominalization use and related studies which have been conducted in this regard. Hopefully, results of the current investigation is useful for a number of people who can benefit the results namely students of applied linguistics who want to understand the related studies about nominalization, researchers who want to conduct their studies of nominalization and interested people to applied linguistics.

Keywords

Systemic Functional Linguistics, Grammatical Metaphor, Nominalization

1. Introduction

Nominalization can be considered in several written form of English manuscripts. Currently, nominalization has converted a symbol in the official English manuscripts. Generally nominalization refers to the change of verbs as well as adjectives into nouns, but nominalization is not merely a simple modification of word category. Nominalization has a comprehensive and narrow sense. Based on the Comprehensive Grammar of English Language, nominalizations are recognized by the variation of

noun phrases that have the interrelated correspondence with the clausal predications. To the academic investigation result regarding nominalization speaking, there are several approaches of nominalization in several classes. The associated statistics display that the style is more official, applying more nominalization might be necessary. However, what are the modifications amongst second language students once they apply nominalization.

A significant approach of academic writing refers to its data concentration and its associated density of language that is attained mostly over a linguistic procedure recognized as nominalization, otherwise denoted to grammatical metaphor (Halliday, 1985), in which verbs and adjectives are linguistically recognized as nouns. Using the nominalizations in academic writing needs significant linguistic dexterity, creativity and finesse to convert verbs and adjectives into abstract nouns for encoding complex connotations (Downing & Locke, 2006). Junic likewise (2010) defines nominalization as “a kind of grammatical metaphor whereby developments that are consistently comprehended by verbs are metaphorically understood by nouns expressing the similar procedure as those verbs” (p. 251).

2. Principle of Nominalization

From the viewpoint of nominalizations and independent clauses, nominalizations could be separated into lexical nominalization as well as clausal nominalization. Compared with clausal nominalization, lexical nominalization relates to a major part of the entire quantity. Generally, lexical nominalizations that are chiefly verbal nominalizations as well as adjective nominalizations. According to Halliday (2000) nominalization refers to the most significant resource for making grammatical metaphor. By the instrument the congruently words as verbs and adjectives are rephrased metaphorically as nouns, instead of working in the clause, as procedure or modifying, they work as things in the nominal cluster. Nominalization is considered by Halliday (2007) “desired clause kind” of English technical manuscript writing where each figure in the metaphoric type is nominalized in the form of wording which congruently interprets “things” with nouns for the quality and procedure. There is another metaphoric alteration in that the reporter is metaphorized as verbal cluster or the system of wording which correspondingly takes a process, for instance, “caused in” in “the driver’s over rapid downhill driving of the bus caused in brake failure”. This mixture of metaphoric structures is the most significant in the semantic road which they have in improving scientific argument though they might not be the most common.

The other is signified in intellectual and rational development. Nominalization donates to the “discursive flow”: it moves through the momentum of the dispute. Grammatical properties of nominalization likewise aid the cognitive procedure in the technical manuscript writings as demonstrated in the subsequent two verdicts:

(1) The components of concept data encoded in the similar language could be more simply related or joined than the elements encoded in several languages: the language match between the components must not matter.

(2) The similar features are the similarities between one of nominalization procedures, which must be worth noting concentration. Generally, in the scientific discourse, the structure that is stated broadly might become refined, and this is regularly named a dead metaphor.

Furthermore, using nominalizations has close associations with the register. The truths are that the register is more official, the more nominalizations are applied (Yang Xinzhang, 2006). The explanations refer to the features of nominalizations like densification as well as abstractness. Consequently, comparing with the informal register as well as spoken form of language, more nominalizations are applied over the formal registers like legal as well as technical texts.

Nominalizations are considered appropriate in “jargony” registers for all types of motives: (1) It causes you leave out the involvement stated in a specific situation like hiding someone’s identity. (2) It causes you stand out the associations amongst the actions as compared to the actions themselves. (3) It allows the close indication of the occasion that is previously recognized by the reader. (4) It displays a lot of data efficiently.

Based on Halliday (2000) nominalizations has a significant role in technical and practical registers, as nominalization makes technical and practical registers likely to make practical terms’ hierarchies and improve an argument little by little. Overall, it is reflected that nominalizations compact data, that is why they are mainly suitable in formal manuscripts.

3. Theoretical Framework

In his study “Remarks on Nominalisation”, Chomsky (1970) focused on the lexicalist hypothesis. The lexicalist hypothesis implies that syntactic transformations function on syntactic constituent merely, and might merely supplement or remove basics. There are two types of the lexicalist hypothesis. The first is the weak lexicalist hypothesis that suggests that transformation cannot be applied in derivational morphology. The strong lexicalist hypothesis refers to the second view and advocates that transformation might likewise not be applied in the area of inflection. Chomsky believes that amongst the numerous nominalizations in English, two that are of specific significance are gerundive nominals like verbal nouns (2) and derived nominals like regular nouns (3) as the transformation of the sentences in (1).

- (1) a. Ali is eager to please.
b. Ali has refused the offer.
c. Ali criticized the book.
- (2) a. Ali’s being eager to please.
b. Ali’s refusing the offer.
c. Ali’s criticizing the book.
- (3) a. Ali’s eagerness to please.
b. Ali’s refusal of the offer.
c. Ali’s criticism of the book

Based on Chomsky there are several modifications amongst the two kinds of nominalizations. These

contain the efficiency of the development in enquiry, the generalization regarding the semantic association amongst the nominal and related proposition, and the internal assembly of the nominal phrase.

Regarding the productivity, transformation uses fairly in gerundive nominals, from subject-predicate form, but there are several limitations on the development of derived nominals.

In the subsequent samples, as offered by Chomsky, it is likely to change the constructions underlying (4) into gerundive nominals of (5) but not to the derived nominals of (6).

- (4) a. Ali is easy (difficult) to please.
 b. Ali is certain (likely) to win the prize.
 c. Ali amused (interested) the children with his stories.
- (5) a. Ali's being easy (difficult) to please
 b. Ali's being (certain likely) to win the prize
 c. Ali's amusing (interesting) the children with his stories
- (6) a. *Ali's easiness (difficulty) to please
 b. *Ali's certainty (likelihood) to win the prize
 c. * Ali's amusement (interest) of the children with his stories

Chomsky declares that some of the resultant nominals superficially look like those of (6), citing those of (7) that match with the gerundive nominals of (8).

- (7) a. Ali's eagerness to please
 b. Ali's certainty that Bill will win the prize
 c. Ali's amusement at (interest in) the children's antics
- (8) a. Ali's being eager to please
 b. Ali's being certain that Bill win the prize
 c. Ali's being amused at (interested in) the children's antics

Regarding the association of meaning amongst the nominal and its proposition, Chomsky declares that there is some uniformity in gerundive nominals, but "the semantic association amongst the related proposition and the derived nominals are diverse and distinctive" (p. 188). Covering the distinctive nature of the association amongst the derived nominal and the related verb further, Chomsky deliberates its discussion as trite. He cites nominals like laughter, marriage, structure, activities, events, revolution, transformation, etc. as having "their separate varieties of connotation and diverse semantic associations to the base form" (p. 189).

Alternative change is that derived nominals have the internal assembly of an NP though the gerundive nominals do not have the internal arrangement of an NP. Therefore it is likely to have the resistant of the theorem as against * the proving of the theorem (gerundive), and John's indifferent criticism of the theorem as opposite to *Ali's unmotivated criticizing the book (gerundive). Likewise correspondingly, resultant nominals do not include feature. Additionally, several derived nominals might be pluralized and happen with the full variety of determiners (e.g., Ali's three proofs of the theorem, numerous of

John's proofs of the theorem) also, derived nominals have the possibility to look freely in the full variety of noun phrase assemblies (p. 188). According to Chomsky, it is problematic to understand how a transformational method to derived nominal might be used for the structures in that they look and their internal structure, and habitually, morphological assets, are those of normal noun phrases (p. 190). He believes that gerundive nominals do not increase to any of these difficulties, and adds that the structures of derived nominals are steady in large amount with the lexicalist method, and might partially be clarified from this viewpoint. Additionally, Chomsky echoes that "the strongest and most remarkable conclusion which follows from the lexicalist hypothesis is that resultant nominals must have the formula of base sentences, while gerundive nominals might in general have the transforms form" (p. 212).

A closer look at lexicalist method to nominalizations specifies that derived nominals are merely listed as nouns in the lexicon, and that nouns like refusal, rejection, growth and a lot more are nouns through the whole lexicon. On the other hand, gerundive nominals are best signified by the transformationalist interpretation, signifying that gerundive nominals are desentential in that they show the features of sentences: they admit aspect, negation and adverbs (Newmeyer, 2005).

4. Some Empirical Studies

Nominalization was investigated broadly from several viewpoints by academics of all linguistic arguments: Halliday (1985), Biber and Gray (2013), Holtz (2009), Sunsinkiene (2010), Norouzi et al. (2012) to name but a few. According to Biber and Gray (2013), the heavy dependence on nominalizations in academic script is typically a 20th Century improvement. Based on their view, the 19th Century witnessed a steady rise in the nouns use, then a dramatic rise in the 20th Century while verbs practiced a corresponding reduction in the equivalent century. According to Biber and Gray (2013) that in academic writing, it is usual to apply nominalised arrangement than verbal arrangement. Arguing that there has been a decrease in specific verbs in 20th century investigations. In addition, that the copula "be" is by far the most significant verb that has practiced a reduction in use throughout the 20th Century. Norouzi et al. (2012) believed that there is a high incidence of deverbalised nominalization in academic writing. Thus academic writing usually uses nominal structures more than verbal structures. The implication here is that modern-day academic writing depends more on nominal style. Holtz (2009) believes that nominalizations happened much more frequently in abstracts than in investigation papers. Likewise, abstracts manifested much broader vocabulary range frequently in the usage of nominalizations than investigation papers. Furthermore, I-Wen Su's (2011) investigation specified that nominalization aids the communicative goals of several moves in the abstract units of medical periodicals. Findings from other investigations specify that nominalization happens more regularly in written manuscripts than in spoken scripts (Norouzi et al., 2012), more in native speaker script than in non-native speaker script (Terblanche, 2009), more in science associated papers than social science or humanities associated papers (Holtz, 2009), and there are more deverbal

nominalizations than adjective-derived nominalization (Norouzi et al., 2012).

Nominalization has the capability to distance the author from the event by developing the representation of a circumstance to a higher level of abstraction. Moreover, there is objectivity and depersonalization to the degree that we can conceptualize the event or abstraction “as if it had temporal persistence, instead of the transience related with the verb” (Downing & Locke, 2006, p. 163).

In so far as users of any specific language are not limited to any one way of speaking or writing, we do not apply the similar linguistic structure any time we apply language. Language makes it likely for people to choose from numerous choices and the moment we select from substitute wordings, we do so to permit us to encounter a communicative need, and that all the options are prearranged. Nominalization is one of such alternatives which suggest an author the chance to rearrange or restate a linguistic item like verb and turn it into a noun. Consequently, procedures that are correspondingly understood by verbs, are metaphorically understood by nouns expressing the same procedure as those verbs (Junic, 2012, p. 251).

One feature of nominalizations refers to their function of treating procedures and events as abstractions and decreasing human involvement, thus making the manuscript detached and objective. Consequently, the rhetorical device used by the author masks his participation and explanation that are subjective in nature (I-Wen Su, 2011). Downing and Locke (2006) declare that in numerous cases of nominalizations, normal human agents, extend the argument further and involvements are absent. Instead, they are substituted by abstractions which are associated to them in some manner. This creates grammatical metaphor a very influential alternative in the performance of data. Grammatical metaphor as they put it, “reconceptualises an event as a participant with the resultant restructuring of the rest of the clause that affects the manner the information is perceived” (p. 164). Downing and Locke, further posit that a whole state of affairs that is in its congruent form might be changed into a clause and be considered as an entity and stated by a nominal. However, not all researchers hail the difficulty of language in academic discourse originating from nominalizations. Giltrow (1999) criticizes the trend of nominalizations to create ambiguity and declared that criticism of scholarly expression has occasionally absorbed on what has been named its heavy nominal style. Students new to a discipline, for instance, might find the nominal style of scholarly writing problematic to read (p. 228). Gforge (2010) believes that nominalization is a basis of ambiguity shares a parallel opinion, and that the lack of semantic data in nominalization rises amount of vagueness and difficulty in correctly encoding a sentence. The concerns uttered by Giltrow and Gforge could be genuine. Though, these might be isolated illustrations of ambiguity attributable to poor proofreading. What is more, anecdotal indications from refereed articles propose that they are perfect instances of good writing devoid of such infractions as vagueness. Again, if a text is complicated it does not mean it is vague. There is no doubt that the literature, and empirical investigations on nominalization are unanimous in the view that it is by far the dominant linguistic instrument that researchers use to attain grammatical metaphor, raising academic writing to a higher linguistic pedestal than non-academic writing considered by ease of language.

References

- Banks, D. (2005). On the historical origins of nominalized process in scientific text. *English for Specific Purposes*, 24, 347-57. <https://doi.org/10.1016/j.esp.2004.08.002>
- Biber, D., & Gray, B. (2013). Nominalising the verb phrase in academic scientific writing. In Bas Aaarts et al. (Eds.), *The Phrase in English, London*. Cambridge University Press.
- Chomsky, N. (1970). Remarks on Nominalization. In R. Jacobs, & P. Rosenbaum (Eds.), *Readings in English Transformational Grammar* (pp. 184-221). Blaisdell, Waltham, MA.
- Cooper, J. (2010). *Nominalization*. Retrieved April 16, 2015, from <http://www.aeo.slf.qmul.ac.uk/Files/Nominalization/Nom Loc.html>
- Downing, A., & Locke, P. (2006). *English Grammar: University Course* (2nd ed.), London: Routledge.
- Dzung, P. (2008). *Research article abstracts in applied linguistics and educational technology: a study of linguistics realizations of rhetorical structure and authorial stance*. Retrieved April 20, 2015, from <http://www.dis.Sagepub.com/content/10/2/231.short>
- Farahani, A. A., & Hadidi, Y. (2008). Semogenesis under scrutiny: Grammatical metaphor in science and modern prose fiction. *Iranian Journal of Applied Linguistics*, 11(2), 51-82.
- Gforge, M. (2010). *An Initial Analysis of Nominalization in Scientific Texts (1700-1900)*. Retrieved May 23, 2015, from http://www.marija.gforge.uni.lu/esslli2010stus_submission_12.pdf
- Giltrow, J. (1999). *Academic Writing: writing and reading across the disciplines* (2nd ed.). Toronto: Broadview Press.
- Halliday, M. A. K. (1985). *An Introduction to Functional Grammar*. London, Arnold.
- Holtz, M. (2009). *Nominalization in scientific discourse: A corpus-based of abstracts and research articles*. Retrieved May 21, 2015, from <http://www.ucrel.lancs.ac.uk/publications/cl2009/341>
- Jezdinska, H. (2008). *Nominalizations in English: Particle Shift in Gerundive Nominalizations*. Retrieved June 20, 2015, from http://www.is.muni.cz/th/199323/ff_b/?lang=en;id=204672
- Junic, M. T. (2012). A Contrastive Study of Nominalization in the Systemic Functional Framework. *Languages in Contrast*, 12(2 iii), 251-276. <https://doi.org/10.1075/lic.12.2.08mik>
- Jurk, N. (2001). *Chomsky: Remarks on Nominalisation: Derived and Gerundive Nominals*. Retrieved June 20, 2015, from <https://www.google.com.gh/search?qt,+Remarks+on+Nominalization>
- Newmeyer, J. F. (2005). *Some Remarks on Roeper's Remarks on Chomsky's "Remarks"*. Retrieved July 11, 2015, from <http://www.skase.sk/Volumes/JTL03/04pdf>
- Norouzi, M. et al. (2012). Deverbal Nominalizations across Written-Spoken Dichotomy in the Language of Science. *Theory and Practice in Language Studies*, 2, 2251-2261. <https://doi.org/10.4304/tpls.2.11.2251-2261>
- Stekauer, P. (2000). "Noam Chomsky". In *English Word-Formation: A History of Research 1960-1995*. Retrieved July 21, 2015, from <http://www.books.google.com.gh>
- Su I-Wen, L. (2011). *Nominalization as a rhetorical device of academic discourse*. Retrieved June 25, 2015, from <http://www.fl.hs.yzu.edu.tw/WLSLL/ppt/4.pdf>

- Susinkiene, S. (2010). *Nominalization as a Cohesive Devise in British Newspaper Editorials*. Retrieved May 24, 2015, from <http://www.vddb.library.lt/fedora/get/LT-eLABA-001.../DS.002.1.01ARTIC>
- Susinskiene, S. (2009). Textual functions of nominalizations in English scientific discourse. *Žmogus ir žodis*, 11(3), 58-64.
- Terblanche, L. (2009). A Comparative Study of Nominalization in L1 and L2 Writing and Speech. *Southern Africa Linguistics and Applied Language Studies*, 27(1), 39-52. <https://doi.org/10.2989/SALALS.2009.27.1.4.752>
- Wenyan, G. (2012). Nominalization in medical papers: A comparative study. *Studies in Literature and Language*, 4(1), 86-93.