

Nominalizations: From Features to Applications in Abstracts of Linguistics Academic Papers

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Abstract

This article analyzes several features and applications of five types of nominalizations in abstracts from linguistics academic papers under the guidance of grammatical metaphor raised by Halliday. By adopting a mixture of qualitative and quantitative methods, frequencies of each type of nominalization were calculated and features of these nominalizations were discussed. Results revealed that process nominalization occupied 84.8

Index terms— features; nominalization; abstracts; grammatical metaphor.

1 Introduction

ince grammatical metaphor was firstly raised by Halliday (1985) in An introduction to grammatical metaphor, it has always been a popular research topic among academic field. Traditional linguist Jespersen (1924) made first attempt on nominalization and called it "nexus substantive". Then Bloomfield (1933) restricted his study to the analysis of the surface structure, thus easily confused the difference between nominalization and common noun groups. Besides, Chomsky (1970) classified nominalization into gerundive, derived and mixed, but similarly, being limited to the sentence level. Then, Halliday gave nominalization a comprehensive interpretation from the perspective of grammatical metaphor and he found that a lot of nominalization existing in scientific discourses (Zhang & Dong, 2014). Scholars at home also carry out a lot of researches on nominalizations, from theoretical explanations to empirical analyses (Zhu, 2006; Chang, 2004; Wang, 2016). They all found that nominalizations are frequently used in comparatively formal discourses and they possess powerful functions, such as increasing the formality, decreasing subjectivity and promoting coherence. However, scholars seldom combine quantitative study and qualitative discussion together to analyze features of each type of nominalization. Therefore, based on the grammatical metaphor theory proposed by Halliday, this study aims to calculate frequencies of different types of nominalizations and analyze their features in abstracts.

2 II.

3 Theoretical Framework a) Grammatical Metaphor

According to Halliday (2000: 341-342), "we recognize that lexical selection is just one aspect of lexicogrammatical selection, or wording; and that metaphorical variation is lexicogrammatical rather than simply lexical. There is a strong grammatical element in rhetorical transference, and once we have recognized this we find that there is also such a thing as grammatical metaphor, where the variation is essentially in the grammatical level forms although often entailing some lexical variation as well." Hence, an expression must have two variations: congruent and metaphorical forms. Congruent forms are the typical ways in which experience is construed. The "typical" is "the way it is commonly said or the way it is said in the absence of any special circumstances" (Halliday, 2000: 343). However, the metaphorical form adds further semantic features. This is a central resource for expanding the meaning potential of language, which is known as grammatical metaphor.

4 b) Nominalization

Halliday (2000) believes that nominalization is a process in which any elements or group of elements are made to function as a nominal group in the clause. He notes that nominalization is the single most powerful

43 resource for creating grammatical metaphor. By this device, processes (congruently worded as verbs) and
44 properties (congruently worded as adjectives) are reworded metaphorically as nouns; instead of functioning
45 in the clause, as Process or Attribute, they function as Thing in the nominal group ??Halliday 2000:352). By
46 nominalizing, the nominalized necessarily goes through lexical-grammatical and semantic change. Generally
47 speaking, nominalization is the major resource producing high lexical density, it possesses the features of
48 condensed information, concise expression, compact structure and strong logic. Hence, nominalization is often
49 used in scientific, legal and political style, because these styles are comparatively formal (Hu Zhuanglin, 1989).

5 c) Halliday's Classification of Nominalization

51 Halliday (1996) identified thirteen types of ideational metaphor, in which there are 5 types of nominalizations, and
52 they are transformed from quality, process, circumstance, relator, zero to entity respectively. as the following table
53 shows, (14), Classroom teaching (14), Applied linguistics (7), Computer assistant teaching (1), Sociolinguistics
54 (6), Grammar learning (5), Spanish learning, German learning and English learning (7)

6 b) Research Instruments

56 This study mainly uses CLAWS and AntConc 3.2.1 to annotate and retrieve all the nominalizations, in which the
57 tool concordance will help author identify all the nominalizations, then delete the words which do not belong to
58 nominalizations with the assistance of manual sorting. The accuracy of identification of nominalization cannot
59 be guaranteed by only using Ant Conc and CLAWS, so manual sorting will also be applied to identify five types
60 of nominalization. For example, the noun form of a word may be identical with its verbal form, such as "this
61 study examines", under this circumstance, "study" is not transformed from verb, so it cannot be regarded as
62 nominalization of process. At this time, concordance tool may show that this situation belongs to nominalization.
63 In order to avoid this problem and carry out a thorough study, manual sorting must be used to double check the
64 results.

7 IV.

8 Results and Discussion

9 a) Frequencies of Five Types of Nominalization

68 The author calculates all the nominalizations used in abstracts, which appear 1326 times. Process nominalizations
69 appear 1125 times and quality nominalizations appear 178 times. While there are 3 excerpts of circumstance
70 nominalizations. Relator nominalizations only appear 14 times. The last type is zero nominalization, which
71 appear 6 times.

10 Figure 1: Frequencies of five types of nominalization

73 Figure ?? reveals that the nominalization of process is most frequently used in abstracts, which accounts for
74 84.8% of the total number of nominalizations. Quality nominalization ranks second, occupying 13.4%. However,
75 nominalization of circumstance and nominalization of relator only account for 0.2% and 1.1%, respectively.
76 Furthermore, the author only found 6 instances of nominalization of zero and the conclusion is therefore that
77 this kind of nominalization seldom occurs in this type of discourses.

11 b) Process nominalization

79 There are 1125 examples of process nominalization in 60 abstracts, in which there are many repetitive words,
80 and the following figure summarizes 6 types. Calculating results reveal that authors often use suffixes to form
81 nominalizations, such as -ion, -ment,ance, -ing and verbal forms and nominal forms are identical. These five
82 types occur 1053 times and account for 93.6%. Additionally, the most two frequently used type are the words
83 which end with -ion and -ment, these two suffixes are the most common way to transform verbs into nouns in 60
84 abstracts, in other words, transforming from processes to entities, especially for -ion, which occupies 60.6%.

85 From figure 2, it can be seen that abstracts writers use a lot of process nominalizations to describe research
86 procedures or results (Eggins, 1994), for example, in order to improve the formality and objectivity of the abstract,
87 they often use evaluation of sth, examination of sth instead of sb evaluate, sb examine. Meanwhile, in this way,
88 unnecessary information are deleted and expression become briefer.

12 c) Quality nominalization

90 As for quality nominalization, there are 178 examples, as figure 3 shows From this figure it can be seen that
91 nominalization of quality also takes the form of adding suffixes and there are mainly six types of suffixes, likeity,
92 -cy, -ance, -ence, -th and -ness, which occupy 82.6%.

93 It is obvious that -ity and -cy are the most frequently used types, especially for -ity, which accounts for 24.7%.
94 In this way, quality is transformed into entity, thus original adjectives no long modify nouns, on the contrary,
95 they become statements, which can be modified by others, hence information become diversified.

96 In abstracts, expressions like complex, possible, accurate seldom appear owing to the genre of abstract, as a
97 kind of academic writing, language in abstract is required to be professional and objective (Day, 1998). That's
98 the reason why nominalization of quality are often employed to state a fact rather than express opinions.

99 **13 d) Circumstance nominalization**

100 The third type is circumstance nominalization, which rarely occurs in abstracts owing to its complex transforma-
101 tional processes. Moreover, using this type of nominalization will weaken the conciseness of abstracts. There are
102 only 3 instances, for example, in favor of supporting, take-duration and because of-reason. This type is difficult
103 to change the word classes, because they serve as a process "associated with or attendant on the process", so
104 they rarely occur in abstracts.

105 **14 e) Relator nominalization**

106 Additionally, nominalization of relator only accounts for 1.1%, which is not so common, because the transforma-
107 tional processes are complicated and difficult to understand. Besides, for the sake of improving the conciseness
108 of abstract, writers seldom use nominalization of relator to express their opinions ??Martin, 1992). Hence, in 60
109 abstracts, only three major types of relator nominalizations are identified, such as in order to-goal/aim/purposes,
110 because/due to and ifcondition. It can be concluded that nominalization of relator is mainly used to express
111 logical relationship, in this way, dynamic action is transformed into static statement, consequently, language
112 become precise and objective.

113 **15 f) Zero nominalization**

114 The last type is zero nominalization. Because it does not involve a transformational process, to a large extent, it
115 serves as appositive in the sentence. For example, authors always use this issue, a problem/phenomenon that...
116 to lead a clause. Because nominalization of zero is not converted by congruence, and these words are abstract
117 words, in other words, they are a kind of categorization toward abstract thinking instead of experience.

118 In conclusion, from the above listed tables and figures, it seems that most of the writers are inclined to use
119 the nominal forms of verbs or adjectives and they seldom use the nominalization of conjunctions or prepositions.

120 V. theory of transitivity system, process is the core of a clause and it is expressed by verbs. Through the use of
121 nominalization the information expressed by a whole clause is condensed ??Quirk & Crystal, 1985). The nominal
122 forms of verbs contribute to condensing information and reconstruct experience. This is best demonstrated by
123 looking at an example.

124 **16 Functions of Nominalizations in Abstracts**

125 1. Analysis of two conversations showed a notable increase in the learner's production of incomplete utterances.
126 (sample 28) Example 1 contains nominalizations of verbs: analysis, conversations, increase, production and
127 utterances. This sentence is short but full of necessary message. However, it needs more than three clauses if
128 the same meaning is conveyed in congruent form. From figure 4 it can be seen that through nominalization, the
129 original clause goes through several steps, and several clauses are condensed into nominal groups or nouns. These
130 five nominalizations link several clauses and condense the length of the original congruent form. In addition, a and
131 notable have been added before increase, which serve as a quantifier and a modifier, respectively. As mentioned
132 above, one advantage of transforming process into an entity is that nominal groups may contain modifiers, thus
133 enhancing the semantic meaning. In this example, increase is transformed into a noun, hence it possesses the
134 quality of "thingness", and it considered as an entity instead of a process (Swales, 1990). The modifier plays an
135 important role in expanding the nominalization lexically; hence the meaning becomes more vivid and precise.
136 Moreover, the focus of the sentence is shifted from the action increase to a noun form increase, which can be
137 modified by adjectives.

138 ii

139 **17 . Increasing the abstraction**

140 The MLJ is a high-quality linguistics journal with very high impact factor, hence, writers who publish their articles
141 in MLJ are professional researchers or experts with good language proficiency. Additionally, they are familiar
142 with the academic genre, and their abstract thinking is advanced, and they are accustomed to making logical
143 analyses. They attach great importance to rational thinking. Consequently, they are adept at shifting clauses,
144 clause complexes or grammatical units down to noun phrases, thereby achieving "reconstructing experience" and
145 "abstracting" (Chang 2004). Take the following two sentences as examples. a) Two groups speak so differently
146 that the researchers focus on their accents. The different accents of two groups drew great attention among
147 the researchers. (sample 26) In this example, sentence a is a congruent form, and it is also a clause complex
148 made up by two clauses, a super ordinate and a subordinate clause. It constructs a phenomenon, which is a
149 sequence formed by two schemata. In the corresponding metaphorical form b, this sequence is constructed by
150 one schema and expressed in one clause. Figure 5 displays the relation between congruent form and incongruent
151 form in expression. In fact, Figure 5 reveals the concept of "rank shift" in grammatical metaphor. Through the

152 use of nominalization of process, a complex clause becomes a clause, and then a clause is transformed into noun
 153 phrase. This kind of rank shift accompanying with the transformation of grammatical category; as a consequence,
 154 the system has been expanded. In this way, change of process brings about a series of chain reactions: actor,
 155 circumstance, relator in the process will all change accordingly. Nominalization of process reconstructs experience
 156 into thing, hence increases the level of abstraction of discourses, and make expressions more diversified ??Van
 157 Dijk, 1990).

158 iii. Forming fixed collocation patterns After calculating all the nominalization, the author found that many
 159 nominal forms of verbs are used in fixed collocation patterns. They often collocate with prepositions, such
 160 as of, to, with, between etc. The following table shows the most frequently used prepositions complementing
 161 nominalizations of process in the data. Table 3 shows that nominalizations in this category are often post-
 162 modified by prepositional phrases. The most frequent preposition to head such phrases is of. Using process
 163 nominalization postmodified by prepositional phrases can make expressions more diversified. For example, in
 164 abstracts expressions like the analysis of, access to, suggestions for, interaction between, engagement with, increase
 165 in are used to convey the same meaning which are originally expressed by verbs. In this way, processes are all
 166 transformed into entity, and the clause expresses static meaning instead of dynamic meaning.

167 18 c) Functions of quality nominalizations

168 i. Achieving impersonalization Nominalization of quality accounts for 13.4% in abstracts, which ranks second.
 169 On the one hand, it is relatively frequently used in abstracts because it can achieve impersonalization, which
 170 is the requirement of academic papers. As an academic genre, expressions in abstracts must be objective, so
 171 authors try to avoid using subjective language. Such as use of first person pronouns or some adjectives which
 172 entailing the sense of evaluation or judgment. Hence, nominalization of quality are frequently used by authors
 173 to achieve impersonalization and use thing as subject. Because nominalization of quality achieves the function
 174 of eliminat-ing subjectivization, making it become object before people make a judgment and not subject to
 175 negotiability. For example, 1. Study results reveal that grammatical accuracy with respect to German word
 176 order..

177 19 . (sample 35)

178 In this example, accuracy is transformed from its corresponding adjective forms. The writer of abstract chooses
 179 to use a nominal form which has the effect that what is presented comes across as a fact rather than an opinion.
 180 If the writer of abstract had instead chosen to use sth is accurate, this would come across as subjective and
 181 would be less convincing to readers. Thus it requires author to create the sense of impersonalization. Moreover,
 182 trying to convince readers of research quality is very important, and authors always use quality nominalizations
 183 to show the validity of their research, but at the same time they will not point out advantages or superiority
 184 of their researches directly, such as involving another agent in the sentence. It is found that "thing" always
 185 serves as subject when writers employ quality nominalizations. So using quality nominalizations can achieve
 186 impersonalization, at the same time, writers convey the implied evaluation toward their own researches.

187 20 Increasing the distance between readers and writers

188 When investigating features of quality nominalizations, another relatively opposite feature is obtained. Under
 189 some circumstance, using quality nominalizations is not necessary from the perspective of starting point of writing
 190 abstract. Due to the practical aspect of abstract writing, abstract serves as a hook to attract readers' attention
 191 and interest. Sometimes, use nominalization of quality may obscure the relationship between writers of abstracts
 192 and the contents described, as a consequence, increasing the distance between readers and writers. For example, 3.
 193 The finding underscores the importance of validating the assumptions about the relationship between task design
 194 and its putative effects on complexity. (sample 57) This excerpt shows the writers' own judgment or evaluation of
 195 their studies. These kinds of expressions may yield a sense of non-negotiable and distant statement of fact, hence
 196 influencing readers' attitude. This means that before readers are able to make their own judgment, writers have
 197 already employed nominalization of quality to presuppose a fact or make readers accept the fact. Expressions
 198 like importance will weaken the emotional strength. For that reason, using quality nominalizations will not
 199 arouse readers' emotional sympathy. Additionally, as mentioned above, some quality nominalizations can achieve
 200 impersonalization to some extent, however, importance is an exception. Because writers of abstracts intend to
 201 convince readers of the quality of their research, they employ this word purposely to show their evaluation. In
 202 other words, this is not an objective judgment.

203 ii. Functions of circumstance nominalizations Nominalization of circumstance seldom occurs in abstracts
 204 according to the quantitative results. 4. Supporting several existing suggestions for L2 pedagogy in this study to
 205 promote more new ideas. (sample 47) In example 5, the author uses supporting several suggestions as a nominal
 206 form to replace the original expression in favor of. But this sentence seems a little bit awkward, the congruent
 207 form may be "this study in favor of several existing suggestions..", it reflects a process of narrating. However,
 208 the incongruent form lacks statement. Additionally, Halliday said that circumstance is a kind of additional minor
 209 process which is subsidiary to the main one. Instead of standing on its own, it serves as an expansion of something
 210 else. So it is complicated to transfer circumstantial elements to nominalization.

211 Besides, such expressions also belong to nominalization of circumstance, to-destination and withaccompani-
212 ment, in abstracts, and writers of abstracts devote to making their expression understandable and clear, so they
213 will not use these expressions. On the contrary, they use the most direct way to state a fact. What is more
214 if writers of abstracts usually use circumstance nominalization, it will increase the complexity of discourse and
215 make language become too wordy. So it obeys the characteristics of conciseness of abstracts, author seldom uses
216 such type of nominalization.

217 iii. Functions of relator nominalizations Similar to nominalization of circumstance, nominalization of relator
218 is rarely used in abstracts, with a ratio of only 1.1%. 5. Our aim in this final article is to complement... (sample
219 45) In this sentence, original expression in order to is replaced by our aim. For one thing, as discussed above,
220 abstracts pay more attention to state a fact and attach less importance to the process of reasoning. Here, writer
221 chose to use aim instead of in order to to hide the relation marker, thus making the logical link between two
222 sentences become vague and expressions become less objective. With respect to the properties of abstracts, to
223 some degree, nominalization of relator does not conform to the objectivity of language expressions required in
224 abstract.

225 On the other hand, relators are the elements interpreting the logical semantic relationship between two
226 processes ??Halliday, 2000:73). A compound sentence is made up of two logically related figures. The
227 semantic relationship between the two figures is achieved by relators. In this sentence, original logical marker is
228 transferred into nominalization, thus it is difficult to identify the relationship between two sentences. As a result,
229 nominalization of relators seldom appears in abstracts as well.

230 **21 iv. Functions of zero nominalizations**

231 This type of nominalization has been ignored by many linguists. In the framework of systemic functional grammar,
232 it is mentioned without a clear definition. Since this class of words undergoes no type of transformation from one
233 word class to another; instead, they are a kind of categorization toward abstract thinking instead of experience.
234 However, there are still some examples considered as transformation from zero to entity, such as the problem of,
235 the fact of, the phenomenon of, an issue that. These expressions belong to nominalization of zero. From the
236 perspective grammatical elements, they serve as apposition. Their functions are to further explain the previous
237 clause, offering a more specific description.

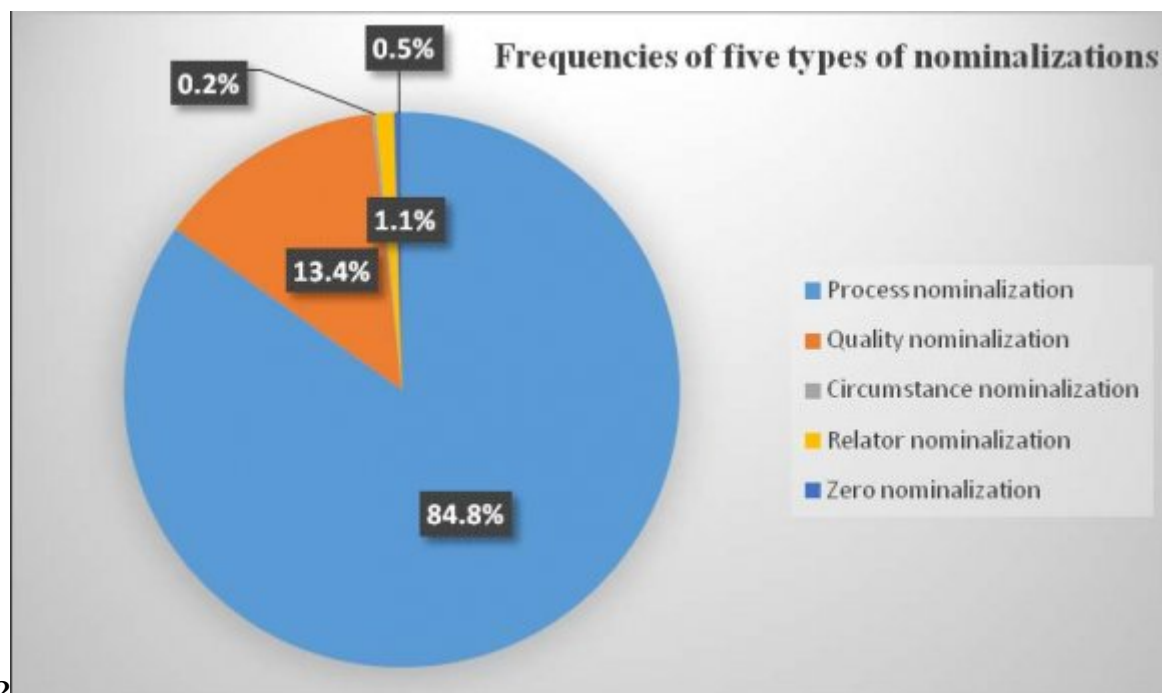
238 Nevertheless, this kind of nominalization is not often used in abstracts. First, because it does not involve
239 a transformational process, it is difficult to distinguish the congruent form from the incongruent form. The
240 identification of nominalization of zero is complicated. Second, condensing information is a crucial feature of
241 abstracts, while the use of nominalization of zero adds a lot of unnecessary depictions. Besides, according to the
242 concept of "rank shift", writers of abstracts prefer to use clause or phrases to express their meaning. Expressions
243 like the problem of can be substituted by a which-clause or an independent clause. Thereby, the frequency of the
244 nominalization of zero is relatively low, and only accounts for 0.5%.

245 **22 VI.**

246 **23 Conclusion**

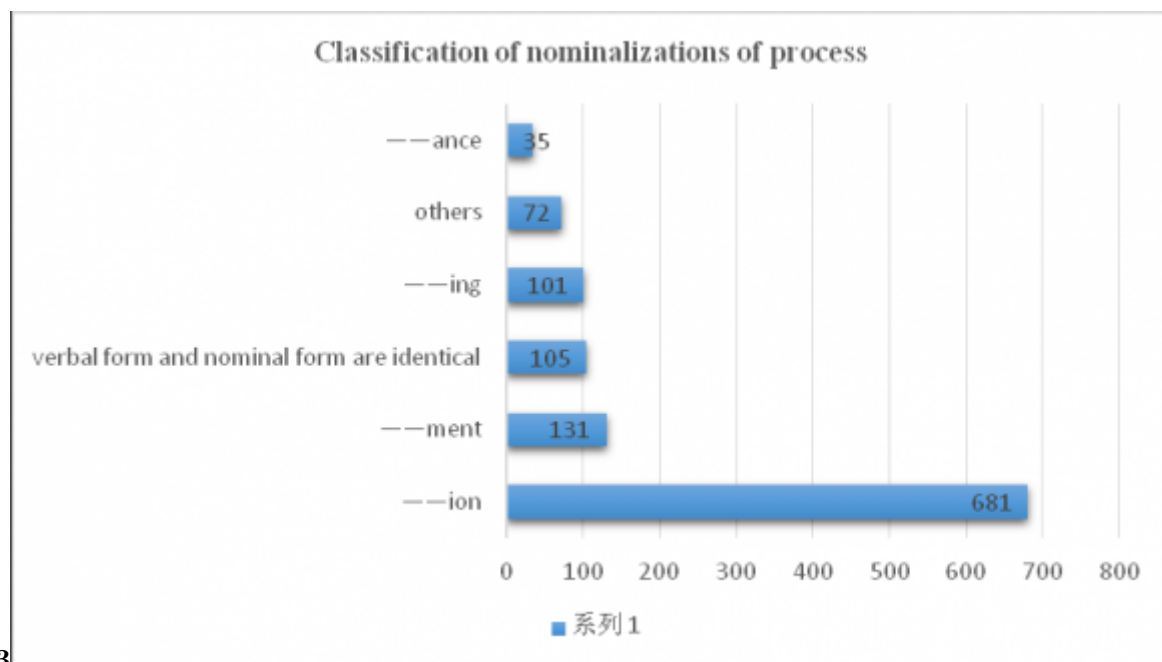
247 The present study investigates the features and applications of five types of nominalizations in abstracts, results
248 reveal that each type of nominalization possess different features and they have different applications in concrete
249 context. First, in abstracts, process nominalization can condense length of abstracts and increase abstraction,
250 moreover, they are often used in fixed patterns. Second, when using quality nominalizations, researchers need to
251 take two features into consideration. Process nominalizations can achieve impersonalization, but at the same time,
252 they will increase the distance between readers and writers. Furthermore, it is suggested that circumstance and
253 relator nominalizations will increase the complexity of abstracts and weaken the logical link, so writers often avoid
254 using them. The last type is zero nominalization, which is also seldom used in abstracts. Because interpreting
255 from the grammatical level, it serves as appositive in sentence and it is not transferred from congruent form
256 and does not involve change in word class. As a whole, when using different types of nominalizations, academic
257 writers should take functions of each type of nominalization into consideration and use them appropriately,
258 making abstracts more concise, objective and cohesive. ¹

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2

Figure 1: Figure 2 :



3

Figure 2: Figure 3 :

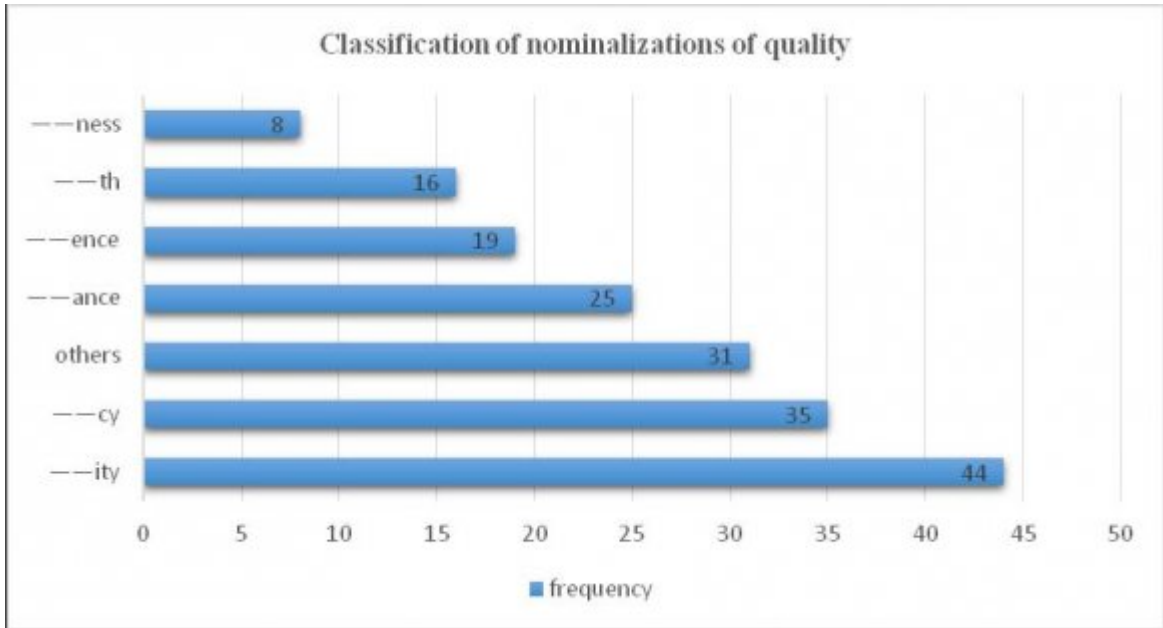
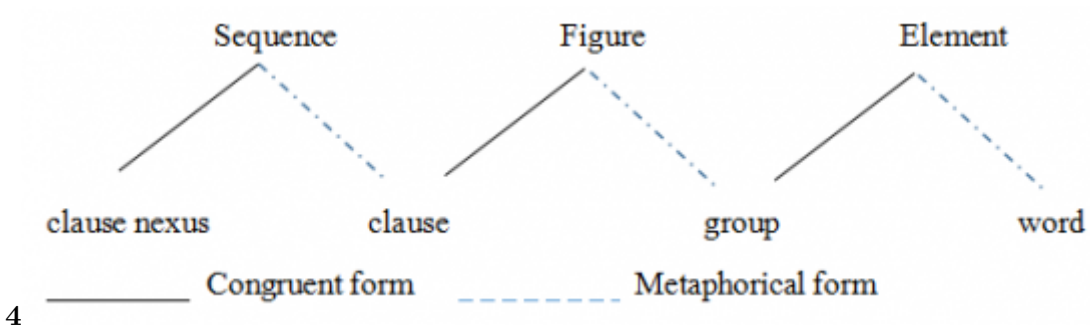
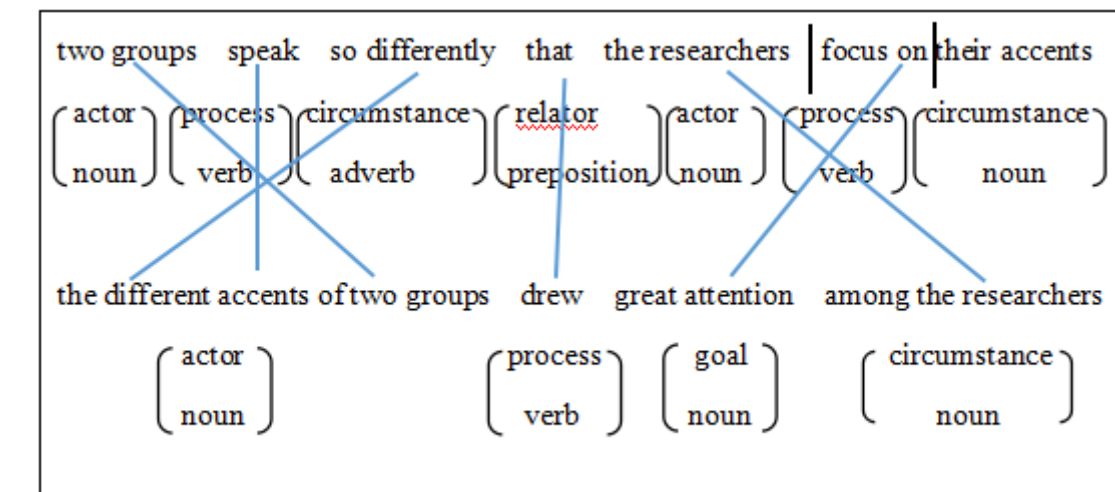


Figure 3: a)



4

Figure 4: Figure 4 :



5

Figure 5: Figure 5 :

1

Semantic functions	Grammatical functions
1) entity quality	epithet thing
2) process	i thing thing event ii aux- il- iary
3) Circumstance	entity minor process
4) relator	entity conjunctive
5) entity (expansion)	head modifier

It can be seen from table 1 that they all belong

to nominalizations. Process nominalization is often

realized by the transference of a verb to a noun. Quality

nominalization refers to any nominalized word or word

group derived from an adjective. Circumstance

nominalization is often realized by the transference of a

prepositional or a prepositional phrase to a noun.

Relator nominalization refers to any nominalized word or

word group derived from a conjunctive. Zero

nominalization is often realized by the transference of

zero to noun.

III.

Research Method and Instrument

a) Data Collection The corpus of this study is made up by 60 abstracts which are selected from The Modern

Figure 6: Table 1 :

2

Research topics
of 60 abstracts

Second Language Acquisition

Figure 7: Table 2 :

3

Prepositions heading post-nominal Modifiers of nominalization of process	of	136
	for in to	55 47 41
	between	32
	with	28

Figure 8: Table 3 :

-
- 259 [Quirk R Crystal and Comprehensive] , D Quirk R & Crystal , Comprehensive .
 260 [London and Edward ()] , : London , Arnold Edward . 1985. p. .
 261 [Longman ()] , Longman . 1985.
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 289 *Northwestern Polytechnical University (Foundation number: ZZ2018047)*,
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